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ANTARCTIC GEOGRAPHIC NAMES*

Meredith F. Burrill
Office of Geography, Department of the Interior

The story of the geographic names of Antarctica is a story of people, men of imagination and courage. It is a story of faith that a task conceived in a knowledge of its elements and carefully planned could be carried through to a successful conclusion, a story of hard work over long periods.

There probably spring to mind immediately names of several intrepid explorers with whose heroics you are familiar. Their fame is "beyond our poor power to add or detract." Some other people of whom most of you have heard less have displayed those qualities too. Some of the story of their roles has already been told in the foreword to *The Geographic Names of Antarctica*,[1] but by no means the whole story. In that volume a short paragraph sets forth for each geographic name, as far as was known at the time of publication, who bestowed the name, when, why, and if for a person, for whom. The book does not tell, for that was not its purpose, all the things that happened before some of the names came finally to be accepted and used as they are today.

The thing that set off the series of events culminating in the book was the undertaking of the U. S. Antarctic Service (USAS) expedition of 1939–41. In connection with it the Hydrographic Office of the Navy undertook the preparation and publication of a nautical chart of Antarctica[2] and accompanying Sailing Directions.[3] This brought into focus the chaotic state of Antarctic geographic nomenclature. It did more – it provided the occasion when something had to be done about it.

Robert A. J. English, then Lt. Commander, USN, and Executive Secretary of the Interdepartmental Executive Committee of the USAS, had charge of the preparation of the chart and the sailing directions. They are monuments to his ability and energy. Many of the problem names he discussed with Lawrence Martin of the Library of Congress and W. L. G. Joerg of the National Archives, both of whom had already published in this field. When a draft of the chart was completed it was referred to Mr. Joerg, who was then not only the outstanding synthesist of international Antarctic exploration to that date but also the Chairman of the U. S. Board on Geographical Names.

At that time full and final authority over geographic names resided in the Secretary of the Interior to whom the Board was advisory. It became clear that resolution of the Antarctic name problems would be very difficult until Antarctica was excepted from the long-standing policy that features are not named for living persons. This policy the then Secretary of the Interior, Harold L. Ickes, strongly espoused as one to be followed without exception, as indeed in domestic names

* An address delivered at the 1st Annual Dinner of the Geography and Map Division, Special Libraries Assoc., at Hanover, N.H., May 30, 1957.

[1] *The Geographic Names of Antarctica.* Gazetteer No. 14. Board on Geographic Names, Department of the Interior. Washington, D. C. 1956.

[2] Chart No. 2562, Hydrographic Office, U. S. Navy. Washington, D. C. 1944 and subsequent revisions.

[2] *Sailing Directions for Antarctica.* H. O. No. 138. Hydrographic Office, U. S. Navy. Washington, D. C. 1943.

it must be. This was a dilemma. Full and free discussion of this problem was precluded by the formality of the Board's relations with the Secretary and the Secretary's extraordinary involvement with important Administration programs. Then World War II broke out and in 1943 the Board was reorganized and staffed.

After the most pressing questions were settled, attention was turned to the Antarctica chart that was approaching publication. It was agreed that Secretary Ickes would be advised to make the needed exception, however repugnant it might be to him, and that decisions on the Antarctic geographic names would be based not only on systematic application of principles but also on the fullest possible knowledge of the facts about the naming of the features, however formidable a research task that might be.

A few days later the fat was in the fire. The chart came off the presses bearing the President's name on a sea and Ickes' name on a mountain range at the Hydrographer's direction. The Hydrographer immediately showed a copy to the President and promptly advised Joerg that the President was pleased. Secretary Ickes was not, and demanded that his own name be removed before the chart was released, which was done. This was not an auspicious introduction to the matter of the policy exception, but it did serve to bring to the Secretary's attention the whole problem of Antarctic nomenclature. A Special Committee on Antarctic Names was therefore appointed to recommend policy and individual names. The original members were W. L. G. Joerg, Capt. Harold E. Saunders, USN, and Lawrence Martin.

In the meantime it developed that the naming for the President also posed a delicate problem, for in a Norwegian language publication it was discovered that the name Amundsen Sea had already been given to that body of water by the Norwegians and published on a map,[4] which had not come to the attention of the Hydrographic Office. Discussions between the Navy and Interior did not result in agreement and the case was referred by the Navy to the President who, after asking and receiving comment by the Interior Department, replied that of course Amundsen's name should be the one used, that for himself a smoking volcano would be more appropriate anyway and that perhaps he should send Adm. Byrd down there again to find one.

Before the President's reply was received the new Special Committee held its first meeting, reviewed the situation and acted on five names. The Committee selected these names as typifying its approach to several kinds of name problems, an approach that would seek the facts and act in accordance with broad principles without fear or favor. The first name on the list was "Amundsen Sea: not Franklin D. Roosevelt Sea, nor Roald Amundsen Sea." Amundsen's name had priority, which would be given great weight. The second name on the list, "Bellingshausen Sea," helped to establish the limits of Amundsen Sea, the two being separated by the peninsula that makes a pronounced break in the coastline.

The other three were names derived from the Wilkes expedition and applied to the peninsula referred to, and to a cape and a mountain some 20–25 degrees to the west. The names selected commemorated James Eights, first American scientist in the Antarctic, the Flying Fish, one of Wilkes' ships, and its commander, Lt. William M. Walker. Eights' name was applied to the peninsula, Flying Fish to the cape, and Walker to the mountain. Byrd had used "Thurston Peninsula," after a supporter of the USAS expedition, and Siple had christened the mountain Mt. Ruth Siple after his wife. The Committee's recommendations reflected the conviction that names of persons who had been there and had made

[4] Kart over ekspedisjoner utsendt av konsul Lars Christensen, Sandefjord, Norge 1926–1930. In *Fangst og Forskning I Sydishavet.* vol. 2. Oslo. 1930.

significant discoveries should take precedence over names of persons who had not. Though names of supporters were not to be ruled out, the names of feminine relatives and friends were. The Committee was not unappreciative of chivalry but felt that the practice could readily get out of hand, that while an explorer might modestly refrain from giving his own name to a significant discovery the Committee need not, and that the discoverer's name was the most appropriate. The Committee was not unaware that these actions would make some people unhappy, and asked that the names be promptly approved and promulgated, for if those did not stick there was no solid basis for the Committee's work. The names stuck until the Committee itself revised them much later, assigning Eights' name to the coast east of the peninsula to which Thurston's name is restored, moving the name Cape Flying Fish to the end of the Thurston Peninsula. Wilkes' name is placed on the mountains forming the peninsula's axis, and Mt. Siple is the great peak that Siple discovered.

Some names became puzzlers for one reason or another; a few still are. One of the more noted examples was Stefansson Strait. Sir Hubert Wilkins on his flight of December 20, 1928 along the east side of the Palmer Peninsula saw straits that he thought cut clear through the peninsula. He named the most "southerly" Stefansson Strait and the land to the left (south, he thought) Hearst Land. The report of this discovery caused considerable stir, for it had a bearing on claims to priority in sighting the mainland of Antarctica. His account of the flight was published in the *Geographical Review*,[5] with photographs and a map made from the photographs and notes. For the next decade the concept of a dividing strait was generally held. Ellsworth's observations on his flights in November 1935 indicated that the concept had to be revised, and the British Graham Land Expedition (BGLE) of 1934–37 confirmed by mid-1936 that there was no transverse strait. Where was it? Joerg found in 1937 that some features could be identified on both the Ellsworth and Wilkins photographs, English tried his hand at the problem in 1939 but did not solve it. Alfred Stephenson, BGLE surveyor tried it in 1940 with the help of A. R. Hinks of the Royal Geographical Society, and identified in the most northerly of the BGLE's photographs some features shown on the most southerly photographs by Wilkins. The USAS expedition of 1939–41 brought back a large number of good aerial and ground photographs. The expedition discovered, among other things, an extensive, low, dome-shaped island covered with ice or snow off the east coast of the peninsula to which no particular significance was then attached. The war came along and the pictures, except for the use that English made of them, reposed in files.

Two years after its original appointment, the Special Committee on Antarctic Names, Kenneth J. Bertrand having replaced Lawrence Martin as the third member, went to work on the names along the east side of the peninsula. Of necessity the Committee reviewed all that had been done before. The recent pictures and other material were studied at length. They did not match up properly with previous interpretations. After a while the Committee learned from Wilkins that his pictures as printed in the *Geographical Review* did not utilize the full area of the negatives and that the cropped area in some negatives showed a wing of the plane establishing the side of the plane from which those pictures were taken. The hope that the order of the photos might be established from the roll of film was dashed when it was learned that the negatives had been cut apart so neatly that one could not put it back together again. However, Sir Hubert went over his notes carefully with the Committee and clarified a number of points.

[5] The pertinent literature is cited in "The True Location of Stefansson Strait Hearst Land." Kenneth J. Bertrand, W. L. G. Joerg and Harold E. Saunders. *Geog. Rev.* Vol. 38 (1948), pp. 475–486.

The overlapping aerial pictures made it possible to proceed from one known point to another, and a low ice-covered point appearing in a panorama in the Sailing Directions was finally correlated with a sketch made from Wilkins' pictures by Briesemeister of the American Geographical Society to accompany Joerg's article in 1937. The panorama showed clearly a long strait between this low ice-covered point and a low ice cliff to the left. Careful checking with Wilkins' observations tallied. Stefansson Strait is in the general position first reported, but it runs north-south instead of east-west. What Wilkins took to be part of the mainland and christened "Hearst Land" is the low dome-shaped, snow-covered island that the USAS expedition had discovered. The Committee retained the name Hearst and merely changed the generic *land* to *island*. You may see it on the map or referred to in the literature, Hearst Island with Stefansson Strait between it and the mainland. Few people looking at a map of Antarctica will realize that the fixing of these names involved many months of work by a number of men devoted to the search for truth with faith that they would find it.

The men who have served on the Antarctic Names Committee are not the only ones who have contributed to the resolution of chaos into order in Antarctic geographic nomenclature, but in my book they are very special people. No less than the explorers whose names they have fittingly applied, they deserve to be referred to as "men of imagination and courage," with "faith that a task conceived in a knowledge of its elements and carefully planned can be carried through to a successful conclusion," men to whom hard work over a long period is no deterrent. The story of the geographic names of Antarctica is a story of people.

HOW MANY CLIMATOLOGIES ARE THERE?

Paul E. Lydolph
Los Angeles State College[1]

In a recent article in the *Annals*, in which he reviews the development of the field of climatology during the past thirty or more years, Arnold Court concludes that at the present there exist three branches of climatology——complex, dynamic, and synoptic——defined according to purpose.[2] Mr. Court clears up a good deal of confusion in concepts by drawing a neat distinction between a climatology which "generalizes from local observations to the energy processes of the entire atmosphere" and a climatology which "particularizes from the atmospheric circulation of local weather." However, he retains the confusion in terms by calling the two climatologies thus defined "dynamic" and "synoptic" respectively, and he induces added confusion by naming a third type of climatology, "complex climatology."

"Complex climatology" is not a category parallel with the other two; it is not defined by purpose, or by method either. It is, rather, a term applied by the Soviets to a system for tabulating day-to-day weather, typed according to specified formula and filed for future unspecified use. It is thus a system for recording data parallel to the punch-card system used by the United States Weather Bureau. The Soviets have attempted to more truly depict climate by adding quasi quantities of incommensurate units and calling the sum totals "weather types"——a utopian attempt not new to climatologists, and they have extended the process beyond its limits of usefulness to the exclusion of other methods of classification and

[1] Written while the author was a Ford Foundation Fellow at the University of California at Berkeley.

[2] Arnold Court, "Climatology: Complex, Dynamic, and Synoptic," *Annals*, Assoc. of Amer. Geog., Vol. 47 (1957), pp. 125–136.

analysis because this is a new and different "Soviet" climatology—an action not new to the Soviets, and they have indicated practical applications for the so-recorded data. But all this window dressing does not conceal the simple fact that "complex climatology" as defined and practiced by Federov, *et. al.* is merely a statistical manipulation, not an analysis.

Adding to the confusion of terms used by Court in his tripartite division of climatology would be L. A. Chubukov's article, "Complex–Dynamic–Climatological Analysis," *Problems of Physical Geography*, Vol. 13 (1948), pp. 29–45 (in Russian), in which the author attempts to add a dynamic factor to the system of notation of weather types by tacking on air-mass and frontal notations and showing a sequence of types during particular weather changes, so that one has recorded types of weather sequences rather than just types of weather.[3]

With the elimination of "complex climatology" as a type of climatic analysis, there remains Court's two types of climatology: one which generalizes, one which particularizes. Both these types of analysis are based on preliminary climatic description; that is, observation of the various weather elements and recording of the resultant data, whether it be a direct recording, a translation into weather types, or a classification into climatic types. Such recorded data can be used in all sorts of practical studies to show relations between climate and other factors at a place—so-called "applied climatology," but, as Trewartha has pointed out, such studies are outside the realm of climatology.[4]

The field of climatology, then, does not consist of three or four parallel categories, but of a duo-analysis based on description, which itself has "applied" connections outside the field. Thus:

X-type analysis Y-type analysis

description ——— applied climatology

The X and Y types of analysis are Court's "dynamic climatology" and "synoptic climatology." These are distinct aspects of the field—distinct in purpose, distinct in method, distinct, unfortunately, in the groups who practice them. But more meaningful, less confusing designators might be assigned to these aspects. The words "dynamic" and "synoptic" as used here not only lose their dictionary meanings, but also differ from their usage as applied to two branches of the field of meteorology.

The first type of analysis, in Court's words, "generalizes from local observations to the energy processes of the entire atmosphere," the climatology "essentially for the research meteorologist." The second "particularizes from the atmospheric circulation to local weather" and "is, in most cases, . . . for the physical geographer and the forecasting meteorologist."[5] One might designate

[3] Perhaps the inopportune combination of terms explains why Court did not cite this much more scholarly and complete article, which appears as the next consecutively-numbered item in *Meteorological Abstracts and Bibliography* after Chubukov's article "Novoe v uchenii o klimate," cited by Court (footnote 6, Court, *op. cit.*, p. 125). In the last five pages of the paper cited, Chubukov named and briefly discussed his new concept: "complex-dynamic-climatology." This part was not summarized in *Meteorological Abstracts and Bibliography*.

[4] Glenn T. Trewartha, "A Reply to: 'What One Geographer Wants from Climatology?,'" *The Prof. Geog.*, Vol. IX, No. 1 (January 1957), pp. 8–9.

[5] Court's phrase, " . . . for the climatologist himself . . .," (Arnold Court, *op. cit.*, p. 135) presupposes the existence of such an individual, distinct from the meteorologist or geographer who is practicing one or the other types of climatic analysis.

them respectively as "generalizing" and "particularizing" climatology, or "energy process" and "local weather" climatology, or "research meteorologist" and "physical geographer-forecasting meteorologist" climatology, to be completely facetious.

The first, using local observations and thermodynamic theory, attempts a complete explanation of the states of the atmosphere. The second, using the known states of the atmosphere, attempts an explanation of local weather. Both are attempting the same thing really—a complete explanation of the atmosphere and its effects at the surface of the earth. The two types of analysis are simply working from the two ends of the knowledge spectrum, the two ends which are at least partially known, and are pushing toward each other into the broad unknown middle. When the two meet, and all physical relations are known, one can work back and forth either way solving whatever is unknown from whatever is known, and there will no longer be two types of analysis. That is why one runs into difficulty applying any two opposite terms to the two present types of analysis; in the ultimate the purposes of the two analyses become the same.

Since the ultimate appears to be still a long way off, I should like to suggest the simple terms "Inductive Climatology" and "Deductive Climatology" as appropriate designators for the present two types of climatic analysis. The words are free from aberrational connotations, at least in the fields of climatology-geography-meteorology, and can be used here to lend specific explanatory meaning to the designators without having to warp the dictionary meanings of the words.

Or perhaps "Integral Climatology"—"Differential Climatology" would be better—more erudite! Who is to say?

GEOGRAPHY, SOCIAL SCIENCE, AND THE NATIONAL SCIENCE FOUNDATION[1]

Harry Alpert
National Science Foundation

Geography is a scientific discipline with multiple orientations. It shares with anthropology and some other fields of scientific inquiry the distinction of being a meeting-ground of the natural sciences, the social sciences, and the humanities. Its diverse character is indicated by its participation in the activities of the National Academy of Sciences – National Research Council, the American Council of Learned Societies, and the Social Science Research Council. University administrators often find it difficult to determine whether geography belongs in a natural science division along with other earth sciences, or in a social science organization unit in intimate association with departments of economics and sociology.

This dual nature of geography as both a natural and social science is viewed by many as one of the major assets of the discipline, but it inevitably creates peculiar difficulties in circumstances which provide for differential treatment of the natural sciences and social sciences.

Such is the situation created by the National Science Foundation Act of 1950 which established the Foundation as an independent executive agency of the Federal government.[2] The differential status of the natural sciences in this basic Act may be summed up, in so far as research support, scholarships, and fellowships are concerned, in the statement that the Act is mandatory with respect

[1] The views expressed are the author's and not necessarily those of the National Science Foundation.

[2] Public Law 507, 81st Congress.

to the natural sciences specifically enumerated therein—mathematical, physical, engineering, biological, and medical sciences—but is only permissive with respect to the social sciences.

The Act's enumeration of the sciences includes the phrase "and other sciences." The legislative history of the Act indicates that this phrase was clearly intended to enable the Foundation to support social science research and award scholarships and graduate fellowships in the social sciences when and if it was deemed desirable to do so. A Senate Committee report states that the language of the Act dealing with divisions within the Foundation "was so phrased to permit the Foundation to explore the needs of the social sciences and to take appropriate action."

In March 1953 the Foundation undertook a systematic and continuing study of the present scientific status of the social sciences and of the role of the National Science Foundation with respect to social science research. As a result of this study, recommendations for a limited program of support of the social sciences were presented by the Director to the National Science Board and were unanimously approved by the Board in August 1954.

This limited social science program was developed on an exploratory basis within the framework of four criteria. These were: (1) the criterion of science, that is, the identification, within the social disciplines of those areas characterized by the application of the methods and logic of science; (2) the criterion of national interest, namely, the assignment of highest priority to social science activities directly related to the responsibilities of the Federal government with respect to national welfare and national defense; (3) the criterion of convergence of the natural sciences and the social sciences; and (4) the criterion of basic research.

On August 1, 1957 the Foundation established a unified Social Science Research Program under the general direction of the Associate Director (Research). At the same time, the scope of the Program was broadened to permit limited support of basic research in the social sciences irrespective of convergence with the natural sciences. Among the disciplines included in the Program are mathematical social science; economic engineering; statistical design; history, philosophy, and sociology of science; anthropology; demography; psycholinguistics; experimental and quantitative social psychology; and *economic and social geography*.

The first NSF grant in economic and social geography was made in 1957 to Norton S. Ginsburg, University of Chicago, to assist in the preparation of a translation of, and guide to, *The Economic Atlas of Japan*. It is anticipated that additional grants in this area will be made in the near future.

In addition to support and stimulation of basic research, the National Science Foundation's activities, in a fully developed program area, include: (1) graduate and faculty fellowships; (2) studies of scientific personnel and manpower; (3) support of science training; (4) studies of the problems of scientific information and communication; (5) support of symposia, conferences, and similar scientific gatherings; (6) support of attendance of scientists at international conferences; (7) emergency support of scientific publications; (8) surveys of the status of fields of science; and (9) support of scientific facilities.

Of particular interest to geographers is the Foundation's collaboration with the Wenner–Gren Foundation in sponsoring an interdisciplinary conference held in June 1955 on "Man's Role in Changing the Face of the Earth." Carl O. Sauer was one of the co-chairmen of this conference and other geographers also participated.[3]

[3]See W. L. Thomas, Jr. editor, *Man's Role in Changing the Face of the Earth*, University of Chicago Press. 1956.

The fellowship program of the Foundation is lodged in the Division of Scientific Personnel and Education. Four types of fellowships are currently available: predoctoral, regular postdoctoral, senior postdoctoral, and science faculty. At the inception of the program in 1952, only *physical* geography was included, but for the national competition for academic year 1955–56, the limiting adjective was eliminated and the program has subsequently been available to all qualified students and teachers of geography.

It is anticipated that the Foundation's activities in economic and social geography, and other social science areas will continue to be modest for the next few years. With the active cooperation of geographers and other scientists it is hoped that a solid basis will be laid, within the framework of the National Science Foundation, for the development of a program that will promote the progress of science and enhance its contribution to the nation's health, prosperity, welfare, and defense.[4]

[4] For further details see H. Alpert, "The National Science Foundation and Social Science Research," *Amer. Socio. Rev.*, Vol. 19 (April 1954), pp. 208–211; H. Alpert, "The Social Sciences and the National Science Foundation: 1945–1955," *Amer. Socio. Rev.*, Vol. 20 (Dec. 1955), pp. 653–661; H. Alpert, "Social Science, Social Psychology and the National Science Foundation," *Amer. Psych.*, Vol. 12 (Feb. 1957), pp. 95–98.

TOWARD THE DEVELOPMENT OF BETTER LANTERN SLIDES

Robert M. Basile
Ohio State University

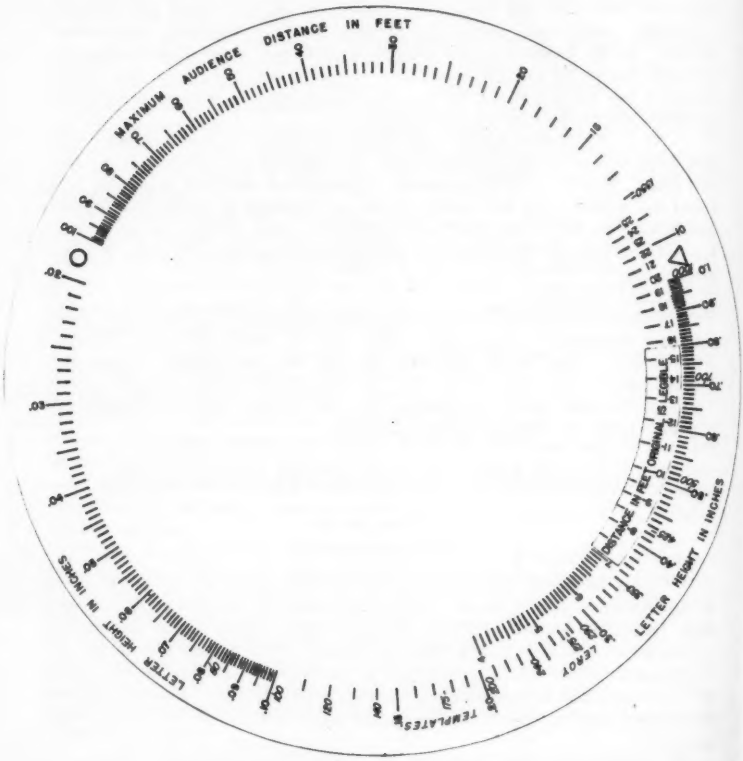
It is frequently necessary to project tables, graphs or maps on a screen to illustrate a scientific paper. Often these slides are illegible when projected even though the original copy was thought to be adequate. It is the purpose of this paper to present briefly some of the work that has been done toward development of better lantern slides, and to introduce a wheel device with which it is a simple task to determine the minimum height of letters that must be used on original copy to assure that the slide made from it will be legible when projected.

Arthur Knapp first worked on this problem and developed a formula for determining the minimum line width to be used on an original drawing or slide copy.[1] The width of line would vary depending upon the length of the room where the slide would be used, width of the original drawing, and the size of the screen. Further, he specified the height of letters and minimum line to form letters. He discussed spacing between letters, spacing between columns of figures and width of lines used on charts. He also presented a formula for judging original copy to determine its worth for slide purposes.

In 1942, Carl A. Moore presented a formula for determination of minimum height of letters for lantern slide copy, and specified certain standardized procedures to be followed for use in drafting maps and charts for slide presentation.[2] His procedures resulted in lantern slides which when projected "were highly legible at the distances indicated by the formula for the given size of original

[1] Arthur Knapp, "Technical Papers and their Presentation," *Bull. Amer. Assoc. Petro. Geol.*, Vol. 12, No. 1 (1928), pp. 77–83.

[2] Carl A. Moore, "Preparation of Lantern-slide Copy," *Bull. Amer. Assoc. Petrol. Geol.*, Vol. 26, No. 10 (1942), pp. 1656–71.

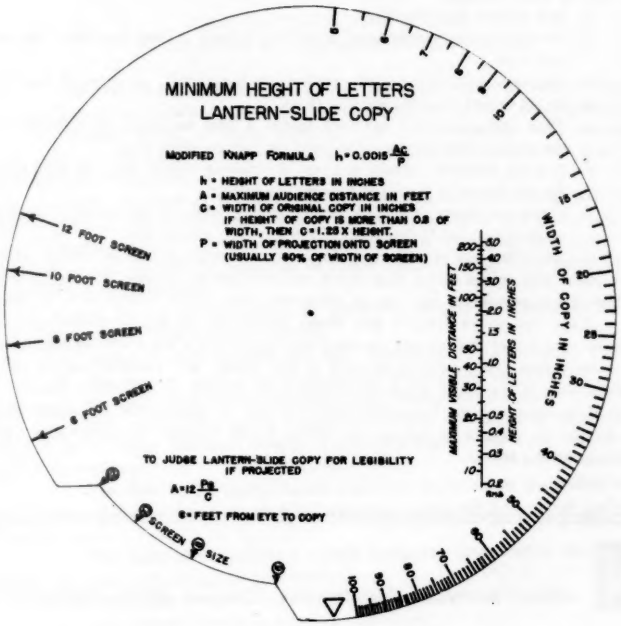


material, size of screen, et cetera." His formula is a modification of the Knapp formula, and like the original takes into consideration size of lecture room, width of original lantern slide copy, and size of screen. This formula is:

$$h = 0.0015 \frac{Ac}{P}$$

where h = height of letters in inches
A = maximum audience distance in feet
c = width of original copy in inches (when the height of the copy is more than 0.8 of the width, then c = 1.25 x height of copy, and not width of copy).
P = width of projection onto a screen in feet (this is usually 80% of the screen width).

The circular device presented here has been designed to solve this formula for height of letter to be used on a drawing when the size of the original has been decided upon, and the audience distance and actual screen size are known. With the smaller circle centered and secured with a thumb tack or pin turn it until the


MINIMUM HEIGHT OF LETTERS
LANTERN-SLIDE COPY
MODIFIED KNAPP FORMULA $h = 0.0015\frac{Ac}{P}$
h = HEIGHT OF LETTERS IN INCHES
A = MAXIMUM AUDIENCE DISTANCE IN FEET
C = WIDTH OF ORIGINAL COPY IN INCHES
IF HEIGHT OF COPY IS MORE THAN 0.8 OF WIDTH, THEN C = 1.25 X HEIGHT.
P = WIDTH OF PROJECTION ONTO SCREEN (USUALLY 60% OF WIDTH OF SCREEN)
12 FOOT SCREEN
10 FOOT SCREEN
8 FOOT SCREEN
6 FOOT SCREEN
MAXIMUM VISIBLE DISTANCE IN FEET
HEIGHT OF LETTERS IN INCHES
WIDTH OF COPY IN INCHES
TO JUDGE LANTERN-SLIDE COPY FOR LEGIBILITY IF PROJECTED
$A = 12\frac{PL}{C}$
L = FEET FROM EYE TO COPY
SCREEN SIZE

audience distance mark (for example, 50 feet) is opposite the mark indicating width of the original copy (for example, 35 inches). Opposite the arrow indicating the size of screen available (for example, 12 foot screen) read the minimum height of letter needed for legible projection (for the example 0.240 inches, equivalent to Leroy template no. 240). If the size of letter to be used is predetermined because of limited drawing equipment, or the wish to use the typewriter or other fixed type size it is, of course, possible to find the width of copy needed to satisfy legibility characteristics.

This device is also arranged so that it is possible to judge whether a given chart or map can be made into a legible lantern slide. Place the appropriate arrow representing the screen size opposite the mark indicating the distance in feet that the original is readable with the naked eye. Find the maximum audience distance from which it will be legible opposite the figure representing the width of the original chart or map. Ordinarily a map or chart from a published work is too small for legible slide copy. It should be redrawn omitting unnecessary detail before the slide is made. A small, legible, original will be more readable when projected from a slide, than a cluttered original of large dimensions.

If a chart rather than slide is to be made, the vertical scale on the right of the small wheel will give the size of letter that will be visible at a given distance. For example, if the chart is to be viewed at an audience distance of 40 feet the smallest letter size should be about one inch in height.

Slides must have eye appeal and brevity as well as legibility. Moore recommends the following:

1. One central idea per slide.
2. If supplementary data must be added, isolate it from the main data and box it in.
3. Maintain ratio 0.8 to 1.0, vertical to horizontal, on original drawing.
4. Avoid closely spaced parallel lines.
5. When using standard lettering guides a finer pen than recommended for the usual lettering should be used for lantern slide copy.
6. Spacing between letters or rows of lettering should be 2 or more times the thickness of the lines forming the letters.
7. Lines for charts should be inconspicuous, about ½ the width of any line on the chart but ¾ the width of the minimum single line.

To these the use of color and simplicity of design should be added. There is no doubt that colors rather than black symbols aid the viewer to grasp quickly the idea being presented, and this is enhanced when detail is kept to a minimum.

Since the above formula and wheel device are an aid in determining the minimum size letter that should be used on lantern slide copy for legibility, and Leroy templates are available in only a few sizes, any question as to which template should be used when an intermediate height is indicated should be resolved by selecting the larger template. It will be appreciated if anyone using this device as a guide in making his slides would forward his observations and criticisms to the author.

Northwestern University Studies in Geography

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LOS ANGELES MEETING OF THE ASSOCIATION OF AMERICAN GEOGRAPHERS

The 54th annual meeting of the AAG, the first ever to be held west of the Mississippi River, is scheduled for the week of August 18–23. Headquarters will be the Miramar Hotel in Santa Monica, with the University of California at Los Angeles the host institution. H. L. Kostanick is Chairman of the Local Arrangements Committee.

Titles of papers, accompanied by abstracts not exceeding 250 words, should reach the Chairman of the Program Committee not later than *March 15, 1958.* Complete manuscripts need not be submitted but if it is felt that material in addition to the abstract is essential to proper judgement by the Committee such material will be considered.

Rules governing preparation of abstracts will be the same as for past national meetings. These are as follows:

1. Abstracts *must* be typed and *must* be submitted in *triplicate.*
2. The original *must* be on good weight, white paper, 8½"x 11".
3. Abstracts *must* be double spaced with reasonable margins.
4. The name of the author, together with his affiliation or address, *must* appear at the upper left-hand margin of the first page. The name should be in upper case letters.
5. The title of the paper should begin two lines below the author's name and at the left-hand margin. It should be typed in caps and lower case *and* should be underlined.
6. The body of the abstract should begin two lines below the title and should be typed with paragraph indentations.
7. The abstract should be truly informative and devoid of jargon.
8. The abstract should *not* exceed 250 words.

These abstracts will be used as printer's copy, without editing or retyping, and it is requested that they be prepared with this in mind. Most of the program will consist of uninvited papers that will be arranged into individual sessions by the Program Committee on the basis of titles and abstracts submitted. These should be addressed to James J. Parsons, Department of Geography, University of California, Berkeley, Chairman of the Program Committee.

Not more than fifteen (15) minutes can be granted for the presentation of a paper and no person can be granted the privilege of presenting more than one paper. The Committee has emphasized that wherever possible contributions containing new ideas, new concepts and new interpretations will be given preference over uncritical descriptive papers.

MIDDLE ATLANTIC DIVISION MEETING

The 4th Annual Meeting of the Middle Atlantic Division will be held on Saturday, December 7, 1957, at the National Academy of Sciences–National Research Council Building, 2101 Constitution Avenue, Washington, D. C.

Plans for the meeting are well under way. The two central themes for this year's program will be Antarctica in the International Geophysical Year and urban area analysis, planning, and development. The Program Committee is headed by William Horbaly.

Papers at the morning session will include an urban analysis of Peoria, Illinois, illustrating effective utilization of aerial photography, and local

planning developments of the Maryland National Capital Park and Planning Commission. The afternoon session will include an historical account of Antarctic exploration and papers by members of recent Antarctic expeditions on current United States exploratory and scientific activities.

Registration will begin at 9:00 A.M. Luncheon, for which reservations will be necessary, will be served following the morning session. For further information, please contact the Secretary of the Division, Miss Charlotte M. Burtis, Apt. 409, 5420 Connecticut Ave., N.W., Washington 15, D.C.

GREAT PLAINS–ROCKY MOUNTAINS DIVISION

The annual meeting and field trip of the Great Plains–Rocky Mountain Division of the Association of American Geographers took place on October 18 and 19 in the Nebraska Sandhills.

The annual banquet, presidential address, and business meeting were held in the Arrow Hotel, Broken Bow, Nebraska, on Friday evening, October 18. Thomas M. Griffiths, University of Denver, the Divisional President, spoke on the topic, "Rock Streams," illustrating the subject with photographs and other illustrations from the San Juan Mountains of Colorado and from Greenland. At the business meeting, Leslie Hewes, University of Nebraska, was elected President for the year 1957–58, and David Simonett, University of Kansas, Vice President and Program Chairman. The University of Kansas will be host to the next annual meeting.

On Saturday, October 19, the group took a field trip of approximately 200 miles in the Sandhills in a 10-car caravan. Forty-three geographers made the trip, which was arranged by the department of the University of Nebraska.

NEW YORK METROPOLITAN DIVISION

Topic: Industrial Development
When: Wednesday, November 13, 1957, 6:30 p.m.
Where: Offices of New York Central Railroad
466 Lexington Avenue
New York, New York
Program: 6:30 p.m.
"Industrial Development Along New York Central Tracks" – discussion led by members of the New York Central Staff

about 7:30 p.m. – Guided tour of Grand Central terminal
about 8:30 p.m. – Private get-together of N.Y.–N.J. geographers

Topic: Urban Geography
When: Tuesday, December 10, 1957, 7:45 p.m.
Where: American Geographical Society
Broadway & 156th Street
New York, New York
Program: 7:45 p.m. – Coffee Hour
8:15 p.m. – Lecture and Discussion
"The Impact of Immigration on Urban Geography" by Charles Abrams, Visiting Professor at MIT.

ANNOUNCEMENTS AND REPORTS

COMMITTEE ON GEOGRAPHERS IN BUSINESS

The Geographers in Business Committee of the Association is attempting to get as extensive a list as possible of persons trained in geography who are *not* engaged in teaching or employed by the Federal Government, whether they are members of the Association or not. We, therefore, ask that any member who knows of anyone with a degree in geography (BA, MA or MS, or Ph.D.) who is employed in other than the two named categories, please send name, address, and occupation to John W. Reith, Geography Department, University of Southern California, Los Angeles 7, California. In addition it would be appreciated if notification could be given of any member who changed his occupation either to or from the above categories since the information in the Handbook–Directory was compiled.

DEADLINE FOR NSF GRANTS

The next closing date for receipt of proposals in the Social Science Research Program of the National Science Foundation is February 1, 1958. Proposals received by that date will be evaluated in the spring. Approved grants will be activated in time for work to begin in the summer or fall of 1958.

The Social Science Research Program supports basic research in anthropology, archaeology, demography, human ecology, social geography, economics, social psychology, sociology, and the history and philosophy of science.

Proposals received after February 1, 1958, will be reviewed following the fall closing date of October 1, 1958, with activation of approved grants early in 1959. Inquiries should be addressed to National Science Foundation, Washington 25, D. C.

POSTDOCTORAL STUDY IN STATISTICS

Awards for study in statistics by persons whose primary field is not statistics but one of the physical, biological, or social sciences to which statistics can be applied are offered by the Department of Statistics of the University of Chicago. The awards range from $3,600 to $5,000 on the basis of an eleven month residence. The closing date for application for the academic year 1958–59 is February 15, 1958. Further information may be obtained from the Department of Statistics, Eckhart Hall, University of Chicago, Chicago 37, Illinois.

NATIONAL COUNCIL FOR GEOGRAPHIC EDUCATION

The 43rd Annual Meeting of the National Council for Geographic Education (formerly National Council of Geography Teachers) will be held November 29–30, 1957 in St. Louis, Missouri. Headquarters will be the Jefferson Hotel. Other information and details of the program appear in *The Journal of Geography.*

SOVIET JOURNAL REQUESTS REVIEW COPIES OF AMERICAN BOOKS ON GEOGRAPHY

A communication has been received from the editor of the Soviet bibliographical journal on geography that was described in the July 1956 issue of *The Professional Geographer.*

The editor, V. V. Pokshishevsky, an eminent Soviet geographer, says that while his office receives virtually all United States periodicals bearing on geographical topics, relatively few books and monographs written by American geographers appear to reach the Soviet Union.

Mr. Pokshishevsky expresses the wish that American geographers try to send him copies of their books upon publication for review in his bibliographical journal. The journal is the principal means enabling Soviet geographers to keep abreast of developments abroad.

Review copies of books should be addressed to:

Professor V. V. Pokshishevsky
Editor
Referativny Zhurnal – Geografiya
Institut Nauchnoy Informatsii
Baltisky Poselok, 42–B.
Moskva 57, USSR

It is suggested that geographers who still have spare copies of recently published books or monographs also send them to the Soviet journal.

———Theodore Shabad

INQUA

More than 300 scientists from 32 countries met in Madrid to celebrate the opening of the Fifth Congress of the International Association on Quaternary Research. From September 2 through 7 at the Consejo Superior de Investigaciones Cientificas in Madrid and from September 14 through 16 at the Universidad de Barcelona, the 12 sections and 5 commissions met repeatedly to hear a crowded program of papers on all aspects of Pleistocene research. Several special sessions were devoted to papers on the methods and applications of radiocarbon dating. This provided an opportunity to reach some mutual understandings between those who do the dating and those who provide the samples and apply the dating.

Pre-Congress excursions were conducted through the Pyrenees, the Cantabrican region and the area around Villarroya. In the middle of the Congress over 100 participants joined in a 5-day excursion through the Levant and to Mallorca, ending in Barcelona. Several half-day and one-day excursions were held during the sessions in Madrid and Barcelona.

At the General Assembly the delegation from the USSR introduced a number of proposals which resulted in the approval of the establishment of three new commissions. These new commissions will deal with: (1) geologic maps of Pleistocene of all areas of the world not included in the work of the Commission on the Geological Map of the Pleistocene of West Europe, (2) establishment of the absolute age of Quaternary deposits, and (3) study of genesis and lithology of Quaternary deposits. The Assembly also approved the expansion of the work of the Commission on Shorelines to include sea bottom sediments. A Sub-Commission of the Commission on the Correlation of the Pleistocene was established to study the stratigraphy and geological history of the Holocene.

The next meeting of INQUA will be held in Poland in 1961.

NEWS FROM GEOGRAPHIC CENTERS

INDIANA UNIVERSITY

George H. T. Kimble has arrived in Bloomington and assumed the chairmanship of the department. Much of his time is being devoted to the completion of his study of Tropical Africa which is sponsored by The Twentieth Century Fund. Stephen S. Visher has been appointed Research Professor of Geography. Although the department will lose his services in the classroom, this appointment will enable Professor Visher to complete his book on the Geography of Indiana. A. Austin Miller of the University, Reading, England, will be Visiting Professor for the second semester. Professor Miller will offer advanced work in climatology. Norman J. G. Pounds has returned from a sabbatical year in Europe during which he traveled extensively in Poland to visit geographical centers. His book on coal and steel in Western Europe has just been published by the Indiana University Press. Thomas F. Barton has returned from two years in Thailand. His book on the economic geography of Thailand, which is expected to appear in both English and in Thai editions, should be published shortly. Otis P. Starkey devoted the summer to a preliminary reconnaissance of the Caribbean Sea. His sabbatical leave during the second semester will be devoted to a study of trends in Caribbean trade. Robert C. Kingsbury has come from the American Geographical Society to take charge of the department's cartography program. Miss Joan Wilson of Notting Hill and Ealing High School, London, and W. Wayne Heiser, doctoral candidate at Northwestern University, have been appointed lecturers for the current academic year.

UNIVERSITY OF MICHIGAN

During the academic year 1956–57, Douglas Crary returned from a one year visit to Africa. George Kish attended the IGU meetings in Rio de Janiero, was Visiting Professor at the University of Hawaii during the second semester, and spent six weeks in Poland and the USSR during the summer and early fall of 1957. Robert B. Hall continues on leave as Director of the Tokyo office of the Asia Foundation. William J. Talbot of Capetown University was Visiting Professor during the second semester and Arch C. Gerlach, Chief of the Map Division, Library of Congress and Secretary of the AAG will be in residence as Visiting Professor during the present semester.

The Department's lecture–seminar series during 1956–57 brought to the campus Andrew H. Clark, Edward B. Espenshade, Chauncy D. Harris, Richard Hartshorne, G. Donald Hudson, Fred B. Kniffen, Douglas H. K. Lee, R. J. Russell, and John C. Weaver.

During the year there were 17 students registered for the master's degree and 26 for the doctorate. Doctoral degrees were awarded to George Honzatko, William F. Jewell, J. Trenton Kostbade, Rex B. Hendrickson, Pierce F. Lewis, and George Kakuichi. This brings the total number of doctoral graduates of the Department to 71. Twelve graduate students were placed in professional positions and 6 were awarded fellowships by the Graduate School for summer field work on dissertation problems.

PENNSYLVANIA STATE UNIVERSITY

The Department, in the Fall semester 1957, has 935 students, 21 graduate students, 45 undergraduate majors, and a staff of 16 members. Two new additions to the staff are Philip Muntz and David A. Smith.

In 1957, Ph.D.'s in Geography have been granted to Francis Seawall and William Plankenhorn. During the past year, Master's degrees have been granted to William Nizinski, Theodore Fuller, Charles E. Williams, Reed Dunn, Jr., George Gerber, Catherine Mowrer, Walter Martin, Patricia Overton, and Jean Baker.

Members of the Department have been particularly active in research during the past year. George F. Deasy and Phyllis R. Griess published jointly two papers – "Pennsylvania Mining" and "Distribution of Pennsylvania's Underground Bituminous Coal Mines, 1931 Versus 1954" in *Mineral Industries*. Frederick J. Wemstedt completed his Office of Naval Research project and the final report, *Philippine Interisland Shipping and Trade*, was published by the Southeast Asia Program at Cornell University. Allan Rodgers' study of "The Pasture–Small Grain–Livestock Region of Northern European Russia" was published in the International Geographical Union *Proceedings*. His article "Some Aspects of Industrial Diversifications in the United States" appeared in *Economic Geography*. E. Willard Miller published the paper "Changing Geographical Patterns of World Mineral Production" in *Mineral Industries*. G. F. Deasy, P. R. Griess, and E. W. Miller spent a portion of the summer on a college textbook in economic geography entitled *The World's Nations* to be published by J. B. Lippincott Co. in the spring of 1958. E. Willard Miller edited the second edition of *Global Geography* published by Thomas Y. Crowell in 1957.

During the past year a number of the Department members have received research and travel grants. Allan Rodgers spent six weeks this summer in the USSR and Poland on a grant from the Carnegie Foundation's Inter-University Committee on Travel Grants. In August, he was in Italy in connection with his ONR project for the study of the port of Genoa. Frederick Wemstedt received a grant from the Penn State Administrative Council of Research to conduct a study of climatic fluctuations and non-irrigated agriculture in the Great Basins. He spent July doing field work in the area. Phyllis Greiss has received a grant from Penn State Administrative Council on Research to work on the adverse economic effect of nationalization of the Bolivian tin mining industry, and G. F. Deasy has a similar grant for research on the electrical utility industry of Pennsylvania. The Mineral Conservation section of the Experiment Station of the College of Mineral Industries at Penn State is sponsoring a "Minerals and Mining Atlas of Pennsylvania" under the direction of George Deasy and Phyllis Griess. The Mineral Industries Experiment Station is also sponsoring the mineral geography research of E. Willard Miller who spent a month this summer studying the mineral economy in the Laurentian Shield of Canada.

STANFORD UNIVERSITY

Joseph E. Williams, Chairman of the Department, has spent much of the past year in travel. He attended the 1956 I.G.U. meetings in Brazil and this spring and summer he visited Honolulu and Hongkong enroute to Japan to attend the I.G.U. meetings in Tokyo. C. Langdon White spent the summer teaching at the University of Guadalajara, Mexico. The third edition of White and Renner, *College Geography*, appeared in January 1957, and a British edition of White and Foscue was published in March. Paul F. Griffen presided as chairman of the Committee on Geographic Research in Education at the fall meeting of the NCGE. He was also local program chairman of the Association of Pacific Coast

Geographers meetings held at Stanford in August. Dr. Griffen is co-author with Robert N. Young of *California—The New Empire State* and of an atlas of California, both published by Fearon Press in January 1957. Robert N. Young has left the Department to become a member of the Santa Clara County Planning Department. He has been replaced by Andrew F. Burghardt from the University of Wisconsin. John Thompson, having completed his dissertation "Settlement Geography of the Sacramento–San Joaquin Delta, California" has been awarded a Fulbright grant and will spend a year in Chile doing an urban study of Santiago. Ronald L. Chatham has joined the staff as instructor while completing his dissertation "Land Use Changes in San Benito County."

UNIVERSITY OF CHICAGO

The Department of Geography has received a Ford Foundation grant for research on underdeveloped regions. The initial objective of the project is to find means of classifying the underdeveloped regions of the world according to the complex problems that hamper economic development and to work out a method of comparing the regions as to the magnitude of their needs. To make such a comparison it will be necessary (1) to identify the significant factors (economic, political, environmental, social) that inhibit, or stimulate, economic development, and (2) to devise a scheme for mapping the world-wide distribution of these factors. Plans call for summarizing the results of the first stage in a published research report with a series of trial maps. A second stage, involving a more extensive atlas, is envisioned, if results of the first stage seem promising. Gilbert F. White and Norton S. Ginsburg will direct the project, with the collaboration of Bert F. Hoselitz of the Research Center on Economic Development and Cultural Change. Advanced graduate students will participate.

The Department is making a nation-wide series of flood plain studies, with financial assistance of Resources for the Future, Inc. Gilbert F. White, Wesley Calef, and Harold Mayer are directing the studies. The objective is to discover changes in urban occupance of flood plains during two decades under the Federal Flood Control Act. Three advanced graduate students, James W. Hudson, John R. Sheaffer, and Donald Volk spent the summer in the field, classifying the flood plains, and noting occupance changes on the fifteen urban flood plain sites selected for detailed study. The three staff members also spent several weeks in the field.

Charles C. Colby has initiated a Southern Illinois University research program to investigate the present and potential significance of the Mississippi, Ohio, and Wabash Rivers to southern Illinois. He has spent July and August in a reconnaissance survey of the Mississippi River from its source to its mouth, and of the Wabash and the lower Ohio. The program also calls for an inter-disciplinary faculty seminar. Mitchell Zadrozny, who recently completed a doctoral dissertation on *Water Utilization in the Middle Mississippi Valley*, worked with Dr. Colby in the field. Bernard Schockel, Paul Sisco, and James Matthews served as consultants in the Evansville and Memphis areas.

Norton S. Ginsburg, on leave from Chicago, taught in the University of Washington (Seattle) during the winter quarter. He has been Acting Chairman of the Department for the summer quarter and has worked with Philip L. Wagner and Bert F. Hoselitz, of the Committee on International Relations, in presenting a new course, "Geographic Aspects of Economic Development: Underdeveloped Regions." His book, *Malaya*, written in collaboration with C. F. Roberts, Jr. (now representing Asia Foundation in Kuala Lumpur), will be published by the University of Washington Press about the first of October. Recently he and J. D. Eyre of the University of North Carolina, received a grant from the

National Science Foundation to translate and annotate the *Economic Atlas of Japan.* Dr. Ginsburg is editor of a textbook on Asia, now in press (Prentice–Hall). The five authors are John E. Brush, Shannon McCune, Herold J. Wiens, John R. Randall, and Allen K. Philbrick.

Harold M. Mayer, besides participating in the flood plain studies, and serving as consultant to Canadian authorities on problems concerned with the St. Lawrence Seaway, has begun work on a comprehensive treatise on urban geography. His study, *The Port of Chicago and the St. Lawrence Seaway,* appeared as a hard-cover edition this summer. This fall he will produce a 13-week TV series on "Problems of American Cities."

Edwin S. Munger, Research Associate and African Correspondent American Universities Field Staff, will give a course in the autumn quarter on "Sub-Saharan Africa." He will leave this country in January 1958 for an extended period of field research in South and East Africa, traveling via New Zealand. In September he presented a paper on "Political Inter-actions between the South African Bureau of Racial Affairs and the National Party" at the American Political Science meetings. Dr. Munger has become a trustee of the Institute of African–American Relations in Washington; and is a member of the Board of Trustees of the Library of International Relations, Chicago. Ann E. Larimore is the latest addition to the staff. She did her undergraduate work at Wellesley and received her master's degree at the University of Chicago in 1955. Nearly completed is her doctoral dissertation on "Jinja, Uganda: An Example of Colonial Multicultural Settlement."

UNIVERSITY OF BRITISH COLUMBIA

The value of geography courses in a university education is becoming increasingly apparent at the University of British Columbia. Last year there were 800 geography enrollments in an Arts Faculty of about 4,500 students. This fall enrollments numbered almost 900. There are 9 graduate students in residence.

The past summer session had the largest group of geography teachers in Canada and perhaps on the continent when 380 geography teachers enrolled in four summer courses. Geography is now a recognized part of the curriculum in the elementary and secondary schools of the province.

A major event in the department in the past year was the publication of the *B.C. Atlas of Natural Resources,* 92 pages and 48 full-color maps. John Chapman was one of the two general editors and Richard Ruggles was one of two Cartographic editors. The amazing amount of cooperative work on the part of government, industry, and university personnel, and the skill and direction of the editors can be understood by geographers who realize that the atlas was published only about two years after the original idea was born at the B.C. Natural Resources Conference.

John Chapman is now completing work on his dissertation, "Land Classification in British Columbia – A Review and Appraisal of the Work of the Land Utilization Research and Survey Division, 1946–53." He plans to be on leave in England next year. Richard Ruggles is working on "The Historical Geography and Cartography of Western Canada to 1795." He plans to be in England next spring and to travel in Europe and visit geographical libraries and map collections in the Soviet Union next summer.

J. Ross Mackay was again in charge of a government Geographical Branch Survey party along the western arctic coast. They continued work on physiography problems and this year worked in the area west of the Mackenzie River delta to the Alaska–Yukon boundary. Dr. Mackay continued his research on a statistical–cartographic analysis of the interactions along the U.S.–Canada border, and the analysis of conformality on map projections. Both projects are sponsored by

research grants from the Canadian Social Science Research Council. During the late summer of 1956, Dr. Mackay and Dr. W. H. Mathews of the U.B.C. Geology Division, were awarded a research and travel grant by the Arctic Institute of North America to study and report on the surficial geology of the Firth River archaeological site, Yukon Territory.

A new member of the geography staff is John K. Stager. He was formerly with the Geographical Branch in Ottawa, and has been lecturing at the University of Edinburgh for the past two years. His dissertation topic there is "Historical Geography of Lower Mackenzie River Valley, Northwest Territories, 1750–1950."

J. Lewis Robinson, Chairman of the Geography Department, took leave to be Visiting Professor of Canadian Geography in the Canadian Studies Program, University of Rochester. While there he rewrote or revised all of the sections on Canada for a new edition of Encyclopedia Britannica, wrote the section on Canada for Encyclopedia Britannica Junior, and continued the rewriting of a new edition of his high school text on "The Geography of Canada." Last spring Dr. Robinson was Program Chairman for the annual meeting of the Canadian Association of Geographers in Ottawa.

Professional geography continues to be a good outlet for U.B.C. graduate students. There are four employed by business and industry in Vancouver; four are working for government or regional planning boards; six are attached to B.C. and other provincial government resources departments; three are with the federal Geographical Branch in Ottawa; and several are teaching geography in the B.C. high schools.

FLORIDA STATE UNIVERSITY

The Department of Geography is opening its second year in its new quarters in the Graduate School Building. The offices, classrooms, and cartographic laboratory are now under one roof. There are 7 on the teaching staff. A heavy undergraduate teaching load takes up most staff time, but research and service activities have not been entirely neglected.

The Department Head, Henry Becker, long-time Chairman of the Governor's Committee for Resource–Use Education, has been chosen by the State Department of Education to head their Committee on Conservation in the Public Schools. Under Dr. Becker's chairmanship, the two committees will function together in training representatives from each of Florida's counties, mostly public school teachers, in the concepts and methods of Resource–Use Education in the hope that county-level programs for the public schools will be generated.

During the past academic year, Dr. Becker and David Christensen developed a set of color film strips for use in Florida's schools. The set, entitled "Using Florida's Resources," is composed of six strips on Florida's People and Their Problems, Using Florida's Forests, Fishing and Mining, Tourism, Manufacturing in Florida, and Farming and Ranching in Florida.

Dr. Brubaker is beginning his second year as Chairman of the Social Science Division of the General Education program on campus. He also was acting Department Head during the summer session.

John Boynton continues his off-campus teaching of Community Resources through arrangements with the General Extension Division of the University of Florida. He is also working as a consultant in community development to the Florida Development Commission. This summer Dr. Boynton conducted the second annual Conservation Workshop for teachers on campus, supported mainly by the Florida Federation of Garden Clubs.

John McMurry spent the past summer doing field work along the Gulf of Mexico shoreline from Cedar Keys south to the Ten Thousand Islands area off the Everglades. His studies, devoted to shoreline classification, are supported by an ONR contract.

Harrison Chase is currently working on the manuscript of a book on political geography. Burke Vanderhill is reworking parts of his doctoral dissertation for publication.

The Department has been active in the S.E. Division of AAG and Henry Becker served as Vice President and Program Chairman for the year 1956–57.

COLUMBIA UNIVERSITY

Geography in Columbia University is taught by a staff associated with the Graduate School of Business, Barnard College, Teachers College, and the Department of Geology. Undergraduate majors are offered in Barnard College, the women's undergraduate college, Columbia College, the men's undergraduate college, and the School of General Studies, for adult students. Graduate students pursuing the M.A. and Ph.D. degrees are registered under the Committee on Advanced Instruction and Degrees in Geography, which functions in the same manner as a department. Its members are: Professors John E. Orchard, Chairman, Phillip Bacon, Charles H. Behre, Jr., William A. Hance, Herman F. Otte, Henry S. Sharp, Arthur N. Strahler, and Leonard Zobler.

Druing the past year there were 24 students preparing for Master's degrees in geography, 7 doctoral students in residence, and 8 doctoral candidates in the field or working on their dissertations. Two Ph.D. degrees were awarded, to Delmas Bugelli, of Pasadena Junior College, and William F. Goodwin, Jr., who is now at Rutgers University. Doctoral students returned from field work in Colombia, Chile, and Japan, while others left for Afghanistan, Canada, Southern Rhodesia, the Sudan, and Yugoslavia. As in the previous year, two advanced students were recipients of fellowships sponsored by the Office of Naval Research, Geography Branch, under the Earth Sciences Division of the National Research Council.

With regard to staff activities, John E. Orchard returned in June from four months of field work in Japan. His particular interest was a study of the impact of the war and of the occupation policies of the Japanese economy.

Phillip Bacon is director of a reorganized program in geographic education in Teachers College. In 1956–57, Ed.D. degrees were awarded to Robert T. Novak, Mary L. Caruso, and Kilough H. Lah (Department of Public Instruction, Seoul, Korea). There are now eleven candidates for the Ed.D. degree in geographic education. During the year Professor Bacon prepared articles appearing in the *Journal of Geography, Tennessee Historical Quarterly,* and *School Science and Mathematics.* He is co-editor of the newly revised American Geographers Series political wall maps, published by A. J. Nystrom and Co., and served as education consultant for the First National Conference on Aviation Education in Washington, D. C., in March 1957.

Charles H. Behre, Jr., Executive Officer of the Geology Department and Professor of (Economic) Geology, has been serving on a special committee reviewing administrative problems at Columbia University and has also been preparing a chapter on mineral economics for a reference book dealing with mineral economics to be published under the auspices of the American Institute of Mining, Metallurgical, and Petroleum Engineers.

William A. Hance, who visited Madagascar in 1956, completed several articles on the island during the year, one appearing in the *Tijdschrift voor*

Economische en Social Geografie, and another scheduled for the *Geographical Review* in January 1958. He continues as director of a Columbia contract with the Geography Branch, ONR, concerned with ports and hinterlands of middle Africa. He and Irene S. van Dongen, Associate in Research, prepared articles appearing in the *Geographical Review*, *Economic Geography*, and the *Annals*. Professor Hance was also research secretary of the Council on Foreign Relations Study Group on Economic Problems of Tropical Africa and is now preparing a book including the papers written for this group. He was elected to the Board of Directors of the newly-formed African Studies Association in May 1957.

Herman F. Otte has been associated since early 1956 with a study of the petroleum and natural gas industries of Alberta in terms of their impact in the province as income and employment multipliers.

Henry S. Sharp, Chairman of the Department of Geology and Geography at Bernard College, is primarily concerned with courses in regional geomorphology of the United States and Europe.

Arthur N. Strahler continues to direct a research project on the quantitative analysis of erosional landforms under sponsorship of the Geography Branch, ONR. The latest technical report of this project applies statistical methods of correlation and multiple regression in an attempt to relate climate, vegetation, soils, and land use to landform dimensions. Professor Strahler's field work in the past two summers in central Maine has reflected a change in emphasis toward developing quantitative and objective methods of sampling and surveying physical properties of the terrain, and toward the feasibility of using air photos to predict these properties.

Leonard Zobler is continuing his work on the use of statistical tools to establish and define objectively regional systems. A new paper on this topic is in preparation.

James W. Reid, Jr., of Davidson College, Jean Gottmann of the Institut d'Etudes Politiques and the Institute for Advanced Studies, Princeton, and Jan O. M. Broek of the University of Minnesota taught in the Summer Sessions of 1956 and 1957. Professor Reid is Visiting Professor of Economic Geography in the current academic year.

Other members of the Division of Economic Geography in 1956 and 1957 are Joseph Butler, William Goodwin, Jr., Associate Dean Wesley J. Hennessy of the School of Engineering, Donald Lloyd–Jones, Floyd Masten, and N. Manfred Shaffer.

UNIVERSITY OF CALIFORNIA, RIVERSIDE

A major in geography is now being offered. Homer Aschmann has been offering courses in the subject since the opening in February 1954 of this new Letters and Science College of the University of California. The addition of William L. Thomas, Jr. to the staff in September 1957 enabled the curriculum to be extended so that students may elect geography as a field of specialization. Formerly the subject could serve only as one of several fields in a divisional major in the social sciences.

The College of Letters and Science at Riverside was instituted on the campus of the University's Citrus Experiment Station in an effort to provide within the framework of a state university an undergraduate education comparable to that offered at small private liberal arts colleges. Present enrollment is about 840 with a faculty of 100; it is expected that the enrollment will double in the next five years, but the hope is to keep the college small with abundant contact among students and faculty. Divisions of Humanities, Life Sciences, Physical Sciences

and Social Sciences, the latter including geography, constitute the formal academic organization, rather than a multiplicity of conventional departments. Faculty appointments, however, are made in specific disciplines. In line with the college's emphasis on undergraduate study in the liberal arts, the first two years of a students' academic program are highly diversified; characteristically, only a single lower division course in geography is offered. Thus a student may begin more specialized studies his junior year with a relatively extensive background in history, natural science, various social sciences, and the arts.

Mr. Thomas returns to teaching geography after six and a half years with the Wenner-Gren Foundation for Anthropological Research where he was Assistant Director of Research. In addition to his academic duties, since August he has been acting as a consultant to the National Academy of Sciences in charge of organizing Section C, one of six concurrent sections of the Sixth National Conference for UNESCO, held in San Francisco November 6–9, 1957. This involved bringing together an inter-disciplinary group of 25 scholars to consider "Science and Technology in Asia, and Their Social Impact." Mr. Aschmann spent the past summer investigating postglacial climatic fluctuations in the Great Basin, presenting his findings to an Archaeological Symposium on the Desert West at Berkeley and the Fourth Great Basin Archaeological Conference in San Francisco.

UNIVERSITY OF TORONTO

Donald F. Putnam taught summer school at the University of Alberta. George Tatham returned from research work in Gottingen, London, Glasgow, and in France, and taught summer school at the National Defence College, Kingston. Donald Kerr has returned after a year of teaching at the University of British Columbia. He and Jacob Spelt continue their research on the location of manufacturing industries in suburban Toronto. Ali Tayyeb spent the summer on a recreation survey of the North Grey Conservation Authority region for the Conservation Branch of the Ontario Department of Planning and Development. Georges Potvin in July published the "City of Saint John Urban Renewal Study" which concludes a survey begun May 1956. He has been working on zoning studies for the City of Toronto Planning Board. William Dean continues his study of Northern Ontario at the Geographic Branch, Ottawa. Frederick Watts taught summer school at the University. David Erskine joined the staff as lecturer and spent the summer doing field studies in Newfoundland. Robert Taylor has left the staff to accept a position at the University of Texas.

OHIO STATE UNIVERSITY

Changes in the Department of Geography include the retirement of Professor Eugene Van Cleef from active teaching service. He came to the University in 1921 and served continuously until retirement except for one year, 1925–26, when he was at Clark University. Other changes include the resignation of Frederick J. Simoons to accept a position at the University of Wisconsin. Additions to the staff include S. Earl Brown of Indiana University, Francis Seawall of Pennsylvania State University, and George P. Patten of Iowa State Teachers College, Cedar Falls.

Henry L. Hunker, who has been at the University of Queensland on a Fulbright appointment since early in March, will return to his post at the University in time for the opening of the winter quarter.

During 1956–57 the Department has continued for a second year its cooperation with the Air Force ROTC. John R. Randall was released from

departmental duties in the winter quarter to teach the Air Science course on Military Aspects of World Political Geography. Robert M. Basile served as a consultant. During the summer, both Randall and Basile participated in a workshop devoted to the geography content of the two Air Science courses on Fundamentals of Global Geography and the Military Aspects of World Political Geography. Randall was the director of this program sponsored by the University and financed by resources from the Mershon Fund.

George S. Mitchell who received the M.A. degree in June has been appointed as a Research Associate by the Research Foundation and assigned to a research project supervised by Guy-Harold Smith. For the third year the Ohio State University Development Fund has supported a research project on the industrial and commercial developments in the upper Ohio Valley supervised by Fred A. Carlson. Lawrence A. Hoffman who has been on the staff since 1952 was advanced to the rank of associate professor.

NEW JERSEY STATE TEACHERS COLLEGE

Last year the New Jersey State Teachers College at Trenton received a grant of several thousand dollars which is to be used over a period of three years to promote projects of a cultural nature on our campus. The Department of Geography and Goode Geographic Society applied for and received an allotment from that grant for our use.

We have invited Dr. M. B. Naidoo, Geographer, Sastri College, Durban, South Africa to join our staff for three months. He will arrive about January 15, 1958 and remain until the middle of April. He will not be scheduled for any teaching duties but will be given every encouragement and facility to meet and work with individual students, student groups, and faculty. Student groups and community groups will be encouraged to use Dr. Naidoo's services as much as possible. Dr. Naidoo is a third generation South African of Indian descent. He can present the complex cultural situation in the Union of South Africa from the view of one of the better educated minority groups. We expect his visit to be a lesson in applied cultural geography. We will engage Dr. Naidoo fully for four to six weeks of his stay in this country. The rest of his time will be spent in visits to other campuses. Arrangements for those visits are being made by our Department. We will be pleased to hear from anyone interested in sponsoring a visit from Dr. Naidoo any time during his stay here. Letters should be addressed to Dr. Adelbert K. Botts, Department of Geography.

BOSTON UNIVERSITY

The Department of Geography, in addition to its M.A. program, is now offering a program leading to the Ph.D. Currently 6 students are taking courses toward the doctorate degree. In the 1957 academic year 6 Master's degrees were awarded, and the Department has at present 5 M.A. candidates and 20 undergraduate majors. The Department hopes to announce a Graduate Fellowship for the year 1958–59, in addition to the graduate assistantship already available.

Franklin C. Erickson, Chairman, spent the past summer on research in photo interpretation involving field ground checks in eastern Massachusetts. During the past year Dr. Erickson has lectured on arctic problems at Dartmouth and Harvard and before Air Force ROTC groups. Robert B. Batchelder taught at the first summer session before leaving for a nine-week trip to the Pacific Northwest. He is devoting most of his time to completing an introductory textbook on oceanography. Saul B. Cohen, on leave for the fall semester, is Visiting Professor in Geography at the Naval War College in Newport, Rhode Island.

His article, "Israel's Fishing Industry" appeared in the January 1957 *Geographical Review.* He has also had a "Bibliography on Shopping Centers" published by the Kroger Company of Cincinnati. George K. Lewis is currently engaged in studies on the role of air power in world strategy with emphasis on the intelligence mission of aerial reconnaissance. He is also continuing his research in urban geography.

Visiting members of the faculty this year will be Bart Epstein of Stop and Shop Markets and Oscar Tenenbaum, Chief, New England Regional Weather Bureau Office, each offering one course. Last year Peter Nash, now at the University of North Carolina, gave a course on "Geography and Community Planning" in line with the Department's interest in that field. Members of the Department also continue to participate in the Institute of Aerial Photography and the African Research and Studies Program at the University.

In October the Department played host to the New England–St. Lawrence Geographical Society at their annual meeting. After a morning session devoted to the presentation of papers, a combined luncheon–business meeting was held. Two field trips were organized for the afternoon, one in an area of urban renewal in downtown Boston and the other to the strip of new commercial and industrial growth along a major highway in the suburbs.

SOUTHERN ILLINOIS UNIVERSITY

The Department of Geography and Geology at Southern Illinois University became two separate departments on July 1, 1955. The Department of Geography now has ten full-time staff members and since September is housed in the new building of the School of Agriculture.

Floyd F. Cunningham, formerly chairman of the dual department, continues as professor and chairman of the Department of Geography. He is continuing his research and lectures on the Middle East and is making preliminary preparations for a round-the-world geography field course in the summer of 1958. He conducted a field course in Europe during the summer of 1956. Ronald Beveridge, who joined the staff in the fall of 1956, is in charge of the division of cartography. He continues work on his dissertation under supervision of the geography staff at the University of Illinois. Robert G. Buzzard, recently appointed President Emeritus of Eastern Illinois University at Charleston, joined the staff in September and is teaching courses in economic geography and historical geography of the United States. Charles C. Colby rejoined the staff on July 1. He will do no teaching but will spend all of his time on a research project on the Mississippi River Basin. Mitchell Zadrozny assisted him during the summer. Carl Swisher joined the staff in January and is completing his work for the doctorate at Northwestern University. His dissertation is on the agricultural regions of Puerto Rico. Frank R. Stern, conducted a geography field course in Europe during the summer. He continues his research studies on the St. Lawrence Waterway. Marjorie Shank spends part of her time as a departmental representative in the Advisement Center. Annemarie Krause is continuing her research work on frost in the tropics. John Hopkins spent the summer at the University of Minnesota working on his doctorate. He teaches courses in economic geography.

John A. Morrison recently of the University of Maryland and the University of Wisconsin will join the staff as Distinguished Professor of Geography on January 1 and will teach courses in Soviet Russia and the Middle East during the winter quarter. He will also conduct a seminar on the Geography of Electric Power Distribution. Robert A. Harper is on sabbatical leave to spend the fall quarter on research and writing. Dalias A. Price spent a part of the summer in the

lower St. Lawrence Valley, Nova Scotia, and Prince Edward Island. He continues work on a climatological research project, a joint undertaking of the Department of Geography and the Illinois State Water Survey. Else Schmidt will return in January to the University of Munich where she will be awarded the Ph.D. in Geography.

THE UNIVERSITY OF KANSAS

With the addition of Duane S. Knos (Ph.D. Iowa), the staff at Kansas now numbers six. Dr. Knos currently divides his time between research on the future population of Kansas City (with Community Studies Incorporated of Kansas City) and lectures on urban geography, U.S.S.R., and statistical methods.

Walter M. Kollmorgen, Chairman, continues his work on the Office of Naval Research project on population and settlement changes in the small grain areas of the Great Plains, and during the summer completed several manuscripts on the project, together with a third manuscript on floods.

A. W. Küchler, as usual, teaches his courses in plant geography and the geography of Europe. His international bibliography of vegetation maps is in the hands of the publishers, but he continues to gather information for a possible supplement. He is working on a new vegetation map of the United States and spent the summer traveling about the west gathering information for this map. In this connection: graduate students interested in plant geography may wish to consider applying for a research assistantship to take effect in September 1958.

T. R. Smith taught the summer session. He is preparing a paper on his research during his Fulbright year 1955–56 in the Netherlands and directs the identification and classification of a collection of 17th and 18th Century maps of K.U. He reports that the university map collection now exceeds 70,000 sheets. Recently, he has become editor of World Maps for Denoyer–Geppert Company.

George F. Jenks, who shares the work on the ONR project on population and settlement changes with Dr. Kollmorgen, also completed a manuscript during the summer. He is now attempting to develop a systematic method for the selection of shading patterns used on maps and graphs.

D. S. Simonett spent the summer in Australia and returned with soil samples from North Queensland. His soils laboratory will be completed shortly. He is working on soil formation on sand dunes in western Kansas and on soil genesis on basalts in North Queensland. A paper on laterite and other ironstone soils is in the press.

During the last two years our graduate students from overseas have come Australia, Ceylon, France, Germany, India, Iraq, Kenya, Pakistan, and Switzerland.

The Denoyer–Geppert Co. has given a Fellowship in Cartography of $1,000 for the 1957–58 year. The present holder is Joe Gound who is working on projects under the direction of Dr. Jenks.

MICHIGAN STATE UNIVERSITY

Robert S. Platt, Professor Emeritus and former Chairman, Department of Geography, University of Chicago, is a Visiting Professor at Michigan State for the fall term. He is conducting graduate seminars on problems in regional geography as applied to Latin America and Europe and methodology. Dr. Platt recently returned from a summer field season in Europe where he did research on the Saar boundaries.

Dieter H. Brunnschweiler, recently added to the staff, comes from the University of Zurich and is specializing in physical geography and the geography of the polar regions.

J. D. Eyre, Visiting Professor for the summer session, taught a course on the geography of the Far East which was part of the Summer Institute on Asia. Dr. Eyre is now teaching at the University of North Carolina.

The Department again offered field training at the MSU Kellogg Gull Lake Biological Station near Battle Creek during the summer of 1957. Increased emphasis was placed upon the use of aerial photos. The latter portion of the six-weeks camp stressed techniques in urban area research, facilitated by the co-operation of the planning departments of Battle Creek and Kalamazoo. The instruction was under the supervision of C. W. Boas.

Recent publications by the staff include: D. H. Brunnschweiler, "Seasonal Changes of the Agricultural Pattern – A Study in Comparative Air Photo Interpretation." *Photogrammetric Engineering*, Vol. 23, March 1957, and "The Air Masses of the Northern Hemisphere – Toward A Genetic Classification of Climates on an Aerosomatic Basis." *Geographica Helvetica*, Vol. 12, October 1957; P. C. Morrison, "Aspects of the Urban Geography of Turrialba, Costa Rica," *Ochanomizu University: Studies in Art and Culture* (Tokyo, Japan), Vol. 9, January 1957; A. K. Philbrick, "Principles of Areal Functional Organization in Regional Human Geography," *Economic Geography*, Vol. 33, 1957; C. L. Vinge and L. M. Sommers, "Geographers Quest," *Centennial Review of Arts and Science*, Vol. I, No. 4 1957; L. M. Sommers, "Bornholm, Denmark: Aspects of the Economic Geography of a Baltic Sea Island," *Northwestern University, Studies in Geography*, No. 2, March 1957.

University research grants have been received for the current academic year by C. W. Boas for research on "Locational Concentration in the American Automotive Industry;" P. C. Morrison for research on "Geographic Aspects of Resource Utilization and of Settlement in Hokkaido, Japan"; and A. K. Philbrick for "Field Study of the Gross Land Use and Economic Areal Organization of 25 Counties in Lower Peninsular Michigan."

C. L. Vinge is on leave for the fall term 1957 to complete the writing of a college level economic geography textbook. A. K. Philbrick conducted a course on World Regional Geography during winter term 1957 over the MSU television station. Nearly 50 maps were constructed especially for this TV course. Dr. Philbrick is scheduled to repeat this course during the winter term 1958.

The departmental air photo collection now includes more than 20,000 photos, approximately half of which are cataloged and filed for use in various department courses. Work continues in an attempt to create an air photo library oriented for geographical use.

Current enrollment of graduate students includes 12 Master's candidates and 7 Ph.D. candidates.

THESIS TITLES

Thesis titles are published in the March and November issues of *The Professional Geographer.* Titles should be submitted to Leslie Hewes, University of Nebraska, Lincoln 8, Nebraska, by February 1 and October 1, respectively.

Ph.D. and Ed.D. Dissertations Completed

ANDERSON, Burton Lawrence "The Scandinavian and Dutch Rural Settlements in the Stillaguamish and Nooksack Valleys of Western Washington." University of Washington, 1957.

ANSTEY, Robert L. "A Comparative Study of the Agricultural Land Use of the Aso Highland and the Kumamoto Lowland of Central Kyushu." University of Maryland, June 1957.*

BROOKS, James Eugene "Settlement Problems Related to Farm Size in the Columbia Basin Project, Washington." University of Washington, 1957.

BROWN, Samuel Earl "The Wyoming Valley, Pennsylvania: A Study in Changing Economic Structures." University of Wisconsin, 1957.

BRZENK, Eleanor T. "The Distribution of Polish Immigrants in Great Britain." Northwestern University, 1957.* Microfilmed.

BUCKHOLTS, Col. Paul Omar "A Political Geography of the Federal Republic of Germany." Harvard University, 1957.*

CARUSO, Mary Leonard "An Ocean Geography for Children." Teachers College, Columbia University, 1957.* Published *Teachers College Abstracts.* [Ed.D.]

DESHLER, Walter Williams "The Dodos Country: A Study of Indigenous Settlement in a Semi-Arid Area of Uganda." University of Maryland, June 1957.*

DOWNS, Margaret B. "Industrial Structure and Pattern of the Wheeling District: Its Evolution and Development, 1840–1950." University of Maryland, June 1957.*

FIELD, Neil Collard "The Role of Irrigation in the South European U.S.S.R. in Soviet Agricultural Growth: An Appraisal of the Resource Base and Development Problem." University of Washington, 1957.

GOODWIN, William "The Middle Passaic Valley: Manufacturing Developments in an Older Economic Region." Columbia University, June 1957. Published *Dissertation Abstracts.* Microfilmed.

ISAAC, Erich "The First Century of Settlement of Kent Island." Johns Hopkins University, 1957.

KRAMER, Fritz L. "Distribution of Some Primitive Agricultural Implements." University of California, Berkeley, 1957.

MARTIN, Kenneth R. "An Analysis of the Broiler Chicken Industry on the Delmarva Peninsula." University of Wisconsin, 1956.

MERRILL, Gordon C. "The Historical Geography of St. Kitts and Nevis, B. W. I." University of California, Berkeley, 1957.* Abstract published *Univ. of Calif.*

NOBLE, Allen George "A Geographic Analysis of the Development Potential of Rantoul, Illinois." University of Illinois, 1957.*

NOVAK, Robert Thomas "Essentials of Geography: A One Semester Textbook in the Fundamentals of Human Geography." Teachers College, Columbia University, 1957.* [Ed.D.] To be published.

*Available for inter-library loan

PLANKENHORN, William F. "A Geographic Study of the Growth of Greater Williamsport (Pennsylvania)." Pennsylvania State University, August 1957.* Abstract published *Pennsylvania State University.*

ROBINSON, Malcolm Emerson "A Method for Investigating the Effects of Tourism on the Functional and Morphological Development of a City: As Applied to Greater Victoria, British Columbia." Northwestern University, August 1957.* Microfilmed.

SCOTT, Thomas William "Lake Michigan Trainferries and their Freight Traffic." University of Illinois, 1957.*

SEAWALL, Francis "A Geographical Analysis of Monongahela River Transportation." Pennsylvania State University, August 1957.* Abstract published *Pennsylvania State University.*

SHUMAN, Stanley Bloom "The Forest Resource Situation of the Eastern Part of the Upper Peninsula of Michigan." University of Illinois, 1957.*

SMITH, Marjorie Corrine "Historical Geography of Champaign County, Illinois." University of Illinois, 1957.*

SMITH, Richard V. "Characteristics and Locational Problems of Puerto Rican Industrialization." Northwestern University, 1957.* Microfilmed.

SONNENFELD, Joseph "Changes in Subsistence Among the Barrow Eskimo." Johns Hopkins University, 1957.

TAYLOR, Andrew "Physiography of the Queen Elizabeth Islands in the Canadian Arctic Archipelago." Université de Montréal, 1956. Mimeographed, as revised. by Amer. Geog. Soc., June 1956, "Physical Geography of the Queen Elizabeth Islands, Canada," 12 vols.

TUAN, Yi-Fu "The Origin of Pediments in Southeastern Arizona." University of California, Berkeley, 1957.

WILLIAMS, Robert L. "Statistical Symbols for Maps: Their Design and Relative Values." Harvard University, 1957.*

WITZIG, Frederick T. "A Geographic Study of the Taconite Industry of Northeastern Minnesota." University of Illinois, 1957.*

Ph.D. and Ed.D. Dissertations in Process

AL-ANI, Khattab S. "The Gezira Scheme in the Sudan as an Example of Development in the Middle East." Columbia University.

BARNES, James "Relationships Between Size, Number, and Distribution of Agglomerated Settlements in the United States." University of Wisconsin.

BEATTY, George Franklin "Geographic Study of Selected Aspects of Water Resources in the Lower Ganges River Basin of India." University of Illinois.

BEYER, Jacquelyn L. "An Analysis of the Resource Use Pattern of the Uncompahgre Irrigation Project." University of Chicago.

BURGHARDT, Andrew F. "The Political Geography of Burgenland." University of Wisconsin.

BUTLER, Joseph H. "The Concepción Area of Chile as a Location for Manufacturing Industry." Columbia University.

COLBY, Mary McRae "Geographic Structure of Southeastern North Carolina." University of Chicago.

DAHLBERG, Richard E. "An Areal Analysis of Grape Production in the Chautauqua–Erie Grape Belt." University of Wisconsin.

EDIE, M. James "The Changing Geographies of Size of Rural Land Holdings in Eastern Montana." University of Wisconsin.

* Available for inter-library loan

FARLEY, Albert F. "The Historical Cartography of British Columbia." University of Wisconsin.

FENTEM, Arlin D. "Cash Grain Areas in the Corn Belt." University of Wisconsin.

FINNEY, Mildred I. "Location of Corn Refining." Northwestern University.

GAULT, Thomas G. "Rural Land Use in Franklin County, Tennessee." George Peabody College.

HAWKINS, Tom G. "Agricultural Geography of Rutherford County, Tennessee." George Peabody College.

MERRILL, Curtis "The MacKenzie River Basin." University of Illinois.

MICHEL, Aloys Arthur "The Helmand Valley Project and the Economy of Afghanistan." Columbia University.

MORGAN, William "The Growth and Functions of the General Office District in the West End of London." Northwestern University.

NIEMELA, Lauri J. "The Mining and Metals Industry of Finland." Northwestern University.

JOHNSON, John A. "Transportation and Towns on the Mississippi." Louisiana State University.

KERSTEN, Earl William "Settlement and Associated Geographic Characteristics of the Central Walker River Area." University of Nebraska.

KHAN, Karim "Louisiana and East Pakistan: A Comparison." Louisiana State University.

KIRCHHERR, Eugene C. "An Analysis of Air Field Facilities and the Functional Relations Phenomena in the Chicago Area." Northwestern University.

LAHEY, James "The Dry Area of Northern South America." University of Wisconsin.

LANCASTER, Jane "A Study in the Development of an Iron Ore Industry at Knob Lake (Ungava)." Columbia University.

LARIMORE, Ann E. "Jinja, Uganda: An Example of Colonial Multi-Cultural Settlement." University of Chicago.

LEWIS, John "Population Changes in Japan." University of Wisconsin.

LIZARRALDE, Roberto "Highland and Lowland Migration in the Venezuelan Andes, Particularly to its Northwestern Piedmont." University of Wisconsin.

PRUSER, Etha M. "An Economic Geography of Plants and Animals." Teachers College, Columbia University. [Ed.D.]

RAU, Herbert L., Jr. "Land Utilization in the Sabana de Bogota." Northwestern University.

SAUCIER, Roger "The Lake Pontchartrain Area." Louisiana State University.

SIMKINS, Paul "Internal Migration in Costa Rica." University of Wisconsin.

SLUTSKY, Herbert L. "An Ecological Study of Kwashiokor in Guatemala." University of Illinois.

STOVER, Stephen L. "Changing Regionalism of Sheep Husbandry in Eastern United States." University of Wisconsin.

SWISHER, Carl "Agriculture Development-Regions and Sub-Regions of Puerto Rico." Northwestern University.

TAYLOR, Harry W. "The Location of Industry in Sao Paulo State, Brazil: A Study of Locative Factors." University of Maryland.

THOMAS, Edwin N. "An Analysis of the Factors Associated with Spatial Distribution of Population Growth in the Incorporated Parts of the Continuously Urbanized Portion of the Chicago Standard Metropolitan Area, 1940–1950." Northwestern University.

THROWER, Norman J. W. "Contrasting Cadastral Survey Systems in Ohio and Their Effect on Rural Settlement." University of Wisconsin.

TOW, Leonard "Southern Rhodesia's Manufacturing Economy." Columbia University.

TROTTER, John E. "Condition and Use of Range Lands in Northwestern Colorado." University of Chicago.

VICERO, Ralph "Milwaukee, Wisconsin: A Study in Political Geography." University of Wisconsin.

WRAY, James R. "Functions and Physical Characteristics of Peoria, Illinois: An Essay on Graphic Techniques in Urban Area Analysis." University of Chicago.

Masters' Theses Completed

AL-SHALASH, Ali H. "The Climate of Iraq." University of Maryland, June 1957.*

BERRY, Brian Joe Lobley "Geographic Aspects of the Size and Arrangement of Urban Centers: An Examination of Central Place Theory with an Empirical Test of the Hypothesis of Classes of Central Places." University of Washington, 1957.

BONE, Robert Martin "The Development and Significance of Tea Cultivation in the Soviet Union." University of Washington, 1957.

BOXER, Baruch "Israeli Shipping and Foreign Trade." University of Chicago, March 1957.

BRYAN, William M. "A Geographic Study of the Tourist Industry of Mexico." Oklahoma State University, August 1957.*

COUGILL, John C. "The Sugar Beet Industry in the Red River Valley." University of North Dakota, June 1957.* Microfilmed.

DAVIS, James Leslie "A Geographical Study of Industrial Plant Location Along the Middle Ohio River Valley." Marshall College, 1957.

DUNN, Reed J., Jr. "A Geographic Analysis of the Mineral Economy of Central Colorado." Pennsylvania State University, August 1957.

FALLS, Robert Hoyle "Agricultural Production and Marketing of the Lower Rio Grande Valley." University of Chicago, August 1956.

FULLER, Marvin D. "A Critical Analysis of the Army ROTC Sub-course 'The Role of the United States in World Affairs and the Present World Situation.'" University of North Dakota, June 1957.* Microfilmed.

GARNER, Robert Vernon "The Tulsa, Oklahoma, Park System." Oklahoma State University, May 1957.*

GERBER, George A. "A Geographical Interpretation of the Factors Localizing the United States Pulp and Paper Industry." Pennsylvania State University, August 1957.

HAGEN, Carlos Busquets "The Azimuthal Equidistant Projection." University of Washington, 1957.

HALLMAN, Delbert D. "Salt Water Disposal in Oklahoma Oil Fields." Oklahoma State University, May 1957.*

JOSHI, Rajanikant Nilkanthrao "The Cotton Textile Industry of Bombay City: A Locational Analysis." University of Washington, 1957.

MacDONALD, William E. "A Study of the German Minority Position in Czechoslovakia." University of California, Los Angeles, June 1957.*

MARCUS, Melvin G. "An Economic Geography of the Steamboat Springs Region." University of Colorado, August 1957.*

MEIER, Esther "Irrigation in West Fresno County, California." University of North Dakota, August 1955.* Microfilmed.

MERRENS, Harry Roy "The Locating of the Federal Capital of the United States." University of Maryland, June 1957.*

* Available for inter-library loan

MILLER, Vincent "A Geographical Analysis of the Locative Factors of the Pulp and Paper Industry in Eastern Canada." Pennsylvania State University, January 1957.

MITCHELL, George Smith "A Russian–English Dictionary: Glossary in Geomorphology and Related Sciences." Ohio State University, June 1957.

MOHN, Willard O. "A Land Use Survey of Coos County, Oregon." University of North Dakota, August 1957.* Microfilmed.

MORRILL, Richard Leland "An Experimental Study of Trade in Wheat and Flour Milling Industry." University of Washington, 1957.

MOWRER, Catherine D. "A Geographic Analysis of Furniture Manufacturing in the United States." Pennsylvania State University, August 1957.

NIZINSKI, William "A Geographical Analysis of the Middle Eastern Petroleum Industry." Pennsylvania State University, August 1956.

NYSTUEN, John David "Location Theory and the Movement of Fresh Produce to Urban Centers." University of Washington, 1957.

PENA, Raymond "A Study of Cotton Production in the Culiacán River Valley, Sinaloa, Mexico." University of California, Los Angeles, April 1957.*

RAYBURN, J. Alan "Settlement Geography of Orangeville, Ontario." University of Kentucky, July 1957.*

ROSS, Dan I. "The Economic Geography of Comal County, Texas." University of Texas, June 1957.*

ROWAN, Charles H. "Historical Evolution of Ornamental Plants in Southern California." University of California, Los Angeles, June 1957.*

SCHWENDEMAN, Joseph Raymond, Jr. "A Study of the Woodworking Industry of the Eastern Mountains and Coal Field Region of Kentucky." University of Kentucky, July 1957.*

STEPHEN, Charles Ross "A Study of Population Distribution in Ohio." Marshall College, 1957.

STROEBEL, William "Large Scale Beef Feeders of Northern Illinois." University of Chicago, June 1957.

THOMAS, Alan "Land Utilization of Sugar Creek Township, Tuscarawas County, Ohio." Kent State University, 1957.*

TOBLER, Waldo Rudolph "An Empirical Evaluation of Some Aspects of Hypsometric Colors." University of Washington, 1957.

URSIN–SMITH, Rolf "The Water Resources of the Upper Colorado River Basin." Ohio State University, June 1957.

WEINTRAUB, Alan Lee "Water Transportation in Alaska's External Trade." University of Chicago, June 1957.

WELSH, Gerald M. "Space and Water for Industry in Mill Creek Valley, Cincinnati." University of Cincinnati, August 1957.*

WENSLEY, Major Robert Keith "Geographic Problems of Suburban Expansion." Marshall College, 1957.

WILLIAMS, Charles E. "The Ecological Crop Geography of the Lemon in California." Pennsylvania State University, August 1957.

WRIGHT, Dorothy Rife "A Study of Population Distribution in Virginia." Marshall College, 1957.

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PERSONAL NEWS

STEPHEN S. VISHER has been appointed Research Professor at Indiana University. Only one other I.U. professor has been honored by such an appointment.

ROGER H. CHARLIER, Chairman of the Department of Geology and Geography at Hofstra College, was honored with a doctorate from the Faculty of Letters of the University of Paris. In January 1957 he was awarded the Croix de la Resistance for his wartime "underground" service in Europe.

ARCH C. GERLACH, Chief of the Map Division, Library of Congress, has been appointed Visiting Professor of Geography for the fall semester at the University of Michigan.

CLARENCE F. JONES, Past President of the AAG and chairman of the Northwestern University Department of Geography, has been appointed the United States national member of the Commission on Geography of the Pan American Institute of Geography and History. The appointment was made by Secretary of State John Foster Dulles. The Institute includes representatives of every American nation under the Organization of American States.

GEORGE W. HOFFMAN recently returned from an eight months stay in Europe. Most of his time was spent in Yugoslavia. He also visited a number of research centers on Eastern and Central Europe, such as Munich, Berlin, Marburg, and Graz. Dr. Hoffman's research was made possible by research leave from the University of Texas and grants from the Social Science Research Council and the American Philosophical Society.

CURTIS M. WILSON, Hartnell College, Salinas, California, was assigned to the Sixth Army Area Intelligence School this past summer. The school was held at Fort Ord, California, for a five-week period.

SAUL B. COHEN has taken leave from Boston University to accept one of five newly established rotating professorships at the Naval War College. Dr. Cohen is the first to fill the geographic post as Academic Consultant in Geography to the National Security Studies program of the College.

PETER H. NASH has resigned as Visiting Critic in City Planning at the Harvard Graduate School of Design and as Planning Director of the City of Medford, Massachusetts. He has been appointed Associate Professor of City and Regional Planning at the Graduate School of the University of North Carolina, Chapel Hill, and has also accepted the position of Research Associate with the Institute for Research in Social Science at the university. During the summer Mr. Nash taught courses in economic geography and geography of Europe at Boston University. At the present time he is conducting field research on the metropolitan development problems in the polynucleated Piedmont Crescent of North Carolina.

ROBERT S. PLATT, Professor Emeritus at the University of Chicago, is currently teaching courses in geographic methodology and regional geography as Visiting Professor at Michigan State University.

ROBERT R. DRUMMOND, Professor of Geography at Indiana State College, is presently (1957–58) at University College, Mandalay, Burma, where he is lecturing and conducting research under the Fulbright program.

LETTERS . . . . .

Dear Editor:

Yi-Fu Tuan's "Use of Simile and Metaphor in Geographical Descriptions," in the September 1957 *Professional Geographer* raises the question as to whether trends toward dullness in writing stem from capabilities and desires of authors or result from editorial policies. As recently as 1917 we find the following in a Water-Supply Paper of the U.S. Geological Survey: "At the peak of the flood and for almost an hour afterward the river ran with a smooth, oily movement and presented the peculiar appearance of a stream of molten red metal instead of its rough, choppy surface." (Raymond C. Pierce, "The Measurement of Silt-Laden Streams," U.S.G.S., W–S Paper 300–C, p. 41)

But with committee censorship and the many editorial specialists today, one may well speculate as to whether procedures of the Geological Survey would permit a Powell or Gilbert manuscript to retain much of its original pungent character. The weight of the heavy hand of policy crushes and smothers originality not only among members and affiliates of the Survey but also well beyond its area of direct impact, because such significant amounts of research and publication in geology are done under Survey auspices. All earth sciences are undoubtedly affected, both by the Survey's demands for accuracy and its rigidity in matters of style. The gains on one page of the ledger, however, should not cancel out desirable entries on another. As emphasized by Tuan, it is certainly possible to be both accurate as to factual material and vivid in style.

More distressing than the absence of simile, metaphor, and piquant expression is the use of unnecessary jargon in geographical and geological writing. It is rarely necessary to reach beyond Webster for vocabulary, and particularly annoying if jargon is inserted in writing for the particular purpose of creating "scientific aroma." A few new concepts needed defining by the masters of expression who were associated with the scientific exploration of the West, but much of the charm of their style may be attributed to the use of words which are readily understood both by the layman and the specialist. Gratuitous insertions of mathematical symbols and equations fall into the category of jargon. Words with good Anglo-Saxon roots may be arranged simply for conveying any idea expressed by an equation. All types of shorthand are useful, but commonly should be avoided if the purpose of a publication is to spread information beyond a circle of persons who understand the cryptograms employed.

—Richard J. Russell
Louisiana State University

Dear Editor:

I attended the 11th Assembly of the International Union for Geodesy and Geophysics held in Toronto from 2 to 14 September 1957. Beside myself very few geographers were present, and to my knowledge none from the United States. Probably most geographers are deterred by the thought of mathematical, physical and chemical formulas. They apparently do not realize that geophysics, as used in the IUGG, embraces such fields as volcanology, meteorology, hydrology and glaciology widely overlapping geography in their treatment. It is natural that the stress is on the physical side . . . but there were enough papers in the daily 10 to 12 parallel sessions to include many a geographer could enjoy . . .

There was an interesting feature in the organization of the Assembly. In some subjects "study groups" had been formed and the work done since the

last meeting was summarized by the chairman of the group and discussed by active researchers. Mimeographed copies of the papers, furnished by the authors, were available. This left more time for discussion. In other subjects, however, papers were presented as in our geographical meetings.

---Eric Fischer
Army Map Service

Dear Editor:

Dr. Cressey's suggestion that "something should be done about the term Middle East" prompts me to draw your attention to our press release on the subject. We pointed out that although the three Easts (Near, Middle, and Far) are handy, much-used designations, they lack official status and remain vague. The National Geographic Society, dealing in terms of logical geographical divisions, divides the three Easts as follows:

Far East: China, Mongolian Republic, Korea, Japan, the Philippines, Indochina, Thailand, Burma, Malaya and Indonesia.

Middle East: India, Pakistan, Afghanistan, Nepal, Bhutan, Sikkim and Ceylon.

Near East: Turkey, Cyprus, Syria, Lebanon, Israel, Jordan, Egypt, Iraq, Iran, and the countries of the Arabian Peninsula.

If we continue to use the terms *Near, Middle* and *Far East*, I feel some effort should be made to standardize them.

---George Crossette
National Geographic Society

WELLINGTON DOWNING JONES, Professor Emeritus, Department of Geography, University of Chicago, was born in 1886 and died on July 24 in St. Joseph, Michigan, after a long illness. He was one of the early graduates of the Chicago Department of Geography, receiving his S.B. degree in 1908 and his Ph.D. in 1914. From the rank of assistant in 1909 he achieved, through a series of promotions, the status of full professor in 1925 and Professor Emeritus in 1945. He was Dean of Science in the College of Arts, Literature and Science from 1918 to 1923 and Associate Dean of the College in 1924–25. Dr. Jones was noted for his pioneer field work in economic geography in southern South America, China, Japan, and India. His main emphasis was on the geography of agriculture and field techniques in which fields he made numerous contributions. One of his major services to the teaching of geography was made through the Jones–Whittlesey *Introduction to Economic Geography*, Vol. 1, published in 1925. Dr. Jones was also the founder of the presently vast collection of maps and photographs at the University of Chicago. Dr. Jones will be remembered as a distinguished geographer, a mature scholar, and an inspiring teacher.

CARL LOUIS STOTZ died in Detroit in July 1957 after a long illness. Dr. Stotz was born in Detroit on February 6, 1908. He received his A.B. in geography at Wayne University in 1930. During the next five years he taught geography at Robert College, Istambul. Returning to the United States he completed his Ph.D. at Clark University in 1937. He was Chairman of the Department of Geography at the University of Pittsburgh until 1941, worked in the Near East for the Foreign Economic Administration during World War II, and after the War served in the Department of Commerce. He was co-author with S. Van Valkenburg of a text on political geography.

NEW PUBLICATIONS

Atlas of the Pacific Northwest: Resources and Development. Richard M. Highsmith, Jr. (editor). Oregon State College. Corvallis. 1957. Second Edition. vii and 141 pp. illust. $3.50.

This edition brings up to date many interesting developments taking place in the Pacific Northwest. The organization has been altered slightly since the first edition. The Atlas contains 72 maps dealing with most of the pertinent physical and cultural elements. These maps are well drawn and for the most part easily read although in some cases poor symbolization is used. One or two pages of text accompany each map. In some instances the text material detracts from rather than adds to the value of the maps.

Twenty-four authors, all from Oregon State College, contributed their efforts in producing this revision. In spite of some shortcomings the Atlas is well worth its cost even though the purchase price has been more than doubled since the first edition.

—Malcolm A. Murray

Operation Deepfreeze. Rear Admiral George J. Dufek. Harcourt, Brace and Co. 1957. x and 243 pp. illust. $5.00.

This book is an interesting and authoritative account of the establishment of the U.S.–IGY stations in the Antarctic written by the commander of the operation and available while the facts are still news. Conveniently organized and well indexed, it will doubtless serve as a contemporary reference for all time. Geographers will appreciate especially the map illustrations. The end plates show the claims and areas seen by U.S. and other explorers. (A clever use of a map in support of U.S. policy of recognizing no claims.) An index map gives the location of all IGY stations and the appendix includes more detailed site location diagrams of the U.S.–IGY stations as well as a site plan for each. Although factual, the book is well written and holds the readers interest without the heroics so often a part of accounts of polar exploration.

—Louis O. Quam

Prehistoric Man. Andre Leroi–Gourhan. Philosophical Library, Inc. New York. 1957. ix and 119 pp. illust. $4.75.

The author, Director of the Museum of Natural History in Paris, presents a well-organized brief summary of the life and times of paleolithic man. The book is designed as an introduction to this complex field and relates in simple readable language the evolution, development and spread of skills and techniques from the Abbevillean to the Mesolithic period. The beginning student and the non-specialist will find this a most pleasant excursion through the Pleistocene as reconstructed by archeological methods in which the tools, arts, crafts, religion and home life of most primitive man are exhibited.

The History of Germany from the Reformation to the Present. Minna R. Falk. Philosophical Library, Inc. New York. 1957. x and 438 pp. $6.00.

This history was apparently intended as the text for a course in modern German history, and presupposes some acquaintance with European history in general, but is well written and easy to read, if at times difficult to follow without reference to an historical atlas. It is an almost purely political history with a

dash of economics. The author wisely avoided becoming caught in the maelstrom of the petty Germanic principalities; therefore this is not the place to look for the history of a particular small state. It treats greater Germany exclusively, and more than half the book is devoted to the period since 1870. A good book for political geographers, it would be more useful had the publishers included some maps to show the political developments. For example, the non-contiguous condition of Prussia, an important factor, is not made clear.

——Robert E. LaMont

Times and Places. Harold Peake and Herbert John Fleure. Oxford University Press. New York. 1956. xv and 336 pp. illust. $6.75.

Times and Places is the concluding book in the 10-volume set, *The Corridors of Time.* The set is designed to give the general reader and the more advanced scholar a readable and clear account of human evolution. This final volume brings together the main points of the other volumes and pays special attention to regional history and development. Part 1 briefly reviews the physical evolution of man, the development of Stone Age tools and the drift of man from his probable site of origin in north Africa. Part 2, of more broad interest to the geographer, is a series of 8 regional studies, beginning with southwest Asia which the authors believe to be the starting place of cereal cultivation. Studies of Europe, Africa, Asia and parts of the Pacific are included; the Americas are omitted. Each study emphasizes the spread of cultural traits and tools, the development of agriculture, the growth of social organization, and the origin and character of port cities and urban areas. The authors also attempt to indicate the ways in which the natural environment influenced these developments. This last aspect is highly generalized and less scholarly than the archeological-anthropological phases, but it does not strongly detract from the usefulness of the work as a handy review of the history of early man and the current state of knowledge in this important field.

Urban Land Use Planning. F. Stuart Chapin, Jr. Harper & Brothers. New York. 1957. xv and 397 pp. illust. Regular price, $8,00; Discount to AIP or ASPO members, $7.00; Text Edition, $6.00.

This is the first textbook on city planning which has been written specifically by a professional planner for advanced city planning students and planning practitioners. It mirrors Professor Chapin's many years of experience, both as practitioner and as teacher in the Department of City and Regional Planning at the Graduate School of the University of North Carolina. The book brings together, without dogma, the latest developments in methods and techniques in the study of urban economy, employment, population, and land use. It introduces a rationale and system of analysis for urban land use planning and pinpoints in detail the procedures to be followed at each stage.

The competently illustrated volume is divided into three parts: the first part, entitled *Land Use Determinants,* discusses the geographic, economic, social, and public interest determinants, with behavior theory introduced to provide a conceptual basis for man's actions in the use, misuse, abuse, and reuse of urban land. Part II, the longest and most significant section, deals with *Tooling Up For Land Use Planning:* it is concerned with regional approaches, the economic base, employment forecasting, demographic studies, and traffic and transportation. Chapter 8 on *Urban Land Studies* is the most detailed; it describes methods and techniques of mapping the urban setting which should be working tools of urban geographers. In the final part, entitled *Land Use Planning,* the book comes to focus on the land use planning process —— requirements for the location, amount, and intensity of land development —— in order that our future urban environments

will be developed and renewed with professional attention to health, safety, convenience, economy, and the amenities of life. The total volume is a salient attempt to introduce the outlines of a theory on urban land use embracing concepts from a great variety of physical and social sciences, including our own. It will be used as a standard reference by our members concerned with the *dynamic* aspects of urban geography.

—Peter H. Nash

Dawn in Arctic Alaska. Diamond Jenness. University of Minnesota Press. Minneapolis. 1957. 222 pp., illust. $4.75.

This is the record of an ethnographer's first winter in the North American Arctic. The author, dean of Canadian anthropologists, was a member of the southern party of Stefansson's Canadian Arctic Expedition, 1913–16. (The final report of the expedition was Vol. XVI, *Material Culture of the Copper Eskimo,* by Diamond Jenness, published in 1946.) In this account of the author's experience along the Arctic coast of Alaska — Barrow, eastward — we get his impressions of a people then new to him, with biases as well as insights apparent. A wealth of ethnographic and geographic material permeates the book. The responsiveness of the Eskimo, both technologically and socially, to environmental stress is, as always, impressive, as is the fortitude of the early Arctic ethnographers.

This account is perhaps most valuable for the Eskimo life it portrays at a critical period. Jenness' residence in this coastal area occurred when commercial whaling in Arctic waters was at its end, and a revived fur trade at its beginning. His is the record of various aspects of Eskimo economic and social life following a period of plenty, a condition which may be duplicated, if only in part, as the present defense-oriented prosperity in the same area comes to an end. To one familiar with this section of the Arctic there will be the not totally unexpected surprise at both the degree of change that had by then occurred in native life, as well as the degree of traditional culture that remained integral to native life, and, in part, which still continues to exist despite the more recent intensive contact with the "white man."

—J. Sonnenfeld

The United States and Canada. Katheryne T. Whittemore. Ginn and Company. Boston. 1957. viii and 408 pp. illust. $4.48.

Latin America, Africa and Australia. Marguerite Uttley and Alison E. Aitchison. Ginn and Company. Boston. 1957. x and 406 pp. illust. $4.48.

Today's grade school children are surrounded by a wealth of well written, beautifully illustrated and, above all, interesting textbooks. In contrast to the drab textbooks of 20 to 30 years ago, the current elementary texts offer the child a real adventure in learning. Typical of these new texts are the two additions to the "Lands and Peoples of the World" series under the able supervision of Robert M. Glendinning, Series Adviser, and Richard Edes Harrison, Cartographic Adviser. A truly geographic flavor is maintained throughout the regionally organized presentation. An enormous array of well selected colored pictures is included, one appearing on almost every page. Special tribute should be paid to the excellent and numerous maps. Skillfully executed shaded relief maps illustrate each region and are supplemented by many city maps, maps of the distribution of particular elements of the physical and cultural landscape and informative diagrams and sketches. Such books as these should stir a child's interest in geography and at the same time provide him with a sound foundation on which to build a knowledge of lands and peoples.

Studies in Geography – Number 2. Malcolm Jarvis Proudfoot Memorial Volume. Northwestern University. Evanston, Illinois. March 1957. v and 140 pp. illust. $4.00.

The volume appropriately opens with a much deserved tribute to Dr. Proudfoot written by Clarence F. Jones. Eleven papers comprise the rest of the volume: Lawrence M. Sommers writing on the economic geography of Bornholm, Richard J. Houk on Portugal's fishing industry, Fred E. Dohrs on land use regions in Neckar basin in southwest Germany, Eleanor T. Brzenk on eastern Poland, Albert S. Chapman on the economic regions of Turkey, John Fraser Hart on changes in British agriculture, Howard G. Roepke on British iron and steel industry, Robert Sinclair on northern Ireland's coal sources, Kenneth Thompson on grasslands in the English Fens, Ralph W. Frank on the rubber industry of Akron, and William L. Garrison on verification of a location model.

Selected and Annotated Bibliography of Marketing Research. Ralph Burnham Thompson. Bureau of Business Research. University of Texas. Austin. 1957. 41 pp. $0.50.

This is a revision of the first edition prepared by the author in 1951. The entries on both books and articles are briefly described and evaluated, and are organized under 7 general headings. Citations for the period 1941 to 1957 are included.

Selected and Annotated Bibliography of Shopping Centers. Jack D. L. Holmes. Bureau of Business Research. University of Texas. Austin. 1957. 55 pp. $0.50.

Articles, books and other publications concerned with shopping centers are briefly summarized and noted under 16 separate headings.

Roads and Trails of Olympic National Park. Frederick Leissler. University of Washington Press. Seattle. 1957. xii and 84 pp. illust. $1.75.

The handy guide to the park is divided into 16 parts, each describing the accessibility, hiking and horse trails, and camping and shelter facilities. Each part is illustrated by a map showing roads, trails, ranger stations, campgrounds, shelters and resorts. The maps were prepared by the Cartographic Laboratories of the University of Washington.

The Living Rocks. Geoffrey Grigson and Stevan Celebonovic. Translations by Joyce Emerson and Stanley A. Pocock. Philosophical Library, Inc. New York. n.d. 94 pp. illust. $6.00.

Results of the expert and artistic craftsmanship of photographer Stevan Celebonovic are richly displayed in this beautiful collection of full-page pictures. Highly magnified and exceptionally clear photographs of 24 minerals and 40 fossils, each identified and briefly described, provide intriguing new views of these geologically commonplace specimens. The short text, unfortunately, adds little or nothing to the value of the book. This volume is the first of an Art and Nature Series.

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